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Promoting Family Planning Through Mass Media in Nigeria: Campaigns Using Public Service Announcements and a National Logo

Karungari Kiragu
Susan Krenn
Bola Kusemiju
Joseph K. T. Ajiboye
Ibiba Chidi
Otum Kalu

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Preface and Acknowledgments

In 1992, two nationwide multimedia campaigns were conducted in Nigeria to increase awareness, approval, acceptance, and use of family planning. Public service announcements broadcast on radio and television promoted the benefits of family planning and urged couples to seek family planning services. A simultaneous logo campaign marked all service delivery points throughout Nigeria with the new National Child Spacing Symbol to make it easier for couples to locate service providers.

Numerous people participated in the PSA and Logo campaigns. The projects were designed, organized, and managed by the Family Health Services Project (FHS) Information, Education and Communication (IEC) Division under the leadership of Susan Krenn, then Country Representative in Nigeria for JHU/CCP and Jose G. Rimon II, Deputy Director, JHU/CCP. Project activities were executed by the current JHU/CCP Country Representative, Bola Kusemiju, and the National Program Officer, Otum Kalu. Other Program Officers in the IEC Division assisted with the many technical, administrative, and managerial phases of the projects.

The field work for the household surveys was conducted by Alfred Adewuyi and his colleagues, Margaret Omideyi and M. O. Raimi, at the Obafemi Awolowo University in Ile Ife. Data were compiled and managed under the guidance of Joseph K.T. Ajiboye and Ibiba Chidi of the Research and Evaluation Section of the FHS IEC Division. Technical assistance for the project was provided by JHU/CCP staff members Cathleen A. Church, Kirsten P. Böse, Karungari (Karusa) Kiragu, D. Lawrence Kincaid, and Young Mi Kim. Additional support was provided by Peter Wehmann of Saffitz, Alpert, and Associates. JHU/CCP acknowledges the guidance and contributions of the FHS Project Administrator, Richard Sturgis, his successor, John McWilliam, and the support of the AIDS Affairs Officer, Eugene Chiavaroli. Likewise, JHU/CCP wishes to acknowledge the pioneering support provided by former AIDS Affairs Officer, Ken McManus, and then REDSO Population Officer, Joyce Holfeld.

Special mention must be made of the many women and men who were interviewed for the household surveys conducted before and after the campaigns. Their cooperation and openness made it possible to measure the effectiveness of the PSA and Logo campaigns.

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Phyllis Tilson Piotrow, Ph.D.
Director
Center for Communication Programs
Johns Hopkins University

Jose G. Rimon, II
Project Director
Population Communication Services
Johns Hopkins University

July 1996

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Summary

In 1992, two national multimedia communication campaigns were launched simultaneously in Nigeria to promote the acceptability and use of family planning among urban men and women of reproductive age. The first, the Public Service Announcement (PSA) Campaign, broadcast a series of five research-based messages on radio and television between April and November 1992. The PSAs promoted the benefits of family planning and encouraged couples to use modern contraceptive methods. The second, the Logo Campaign, developed and distributed in April 1992 more than 1 million pieces of printed matter, ranging from billboards and posters to pamphlets and decals. All these materials featured Nigeria's new National Child Spacing Symbol. The logo itself served as a conspicuous and almost universally recognized marker of service-delivery points. The accompanying PSA Campaign explained the meaning of the logo and directed couples to seek family planning services and advice wherever the logo was posted. Although the two interventions were initially planned as separate campaigns, that strategy was changed and both activities were merged into a single initiative with complementary and reinforcing components.

To assess the synergistic impact of the twin campaigns, baseline and follow-up household surveys were conducted in the three cities of Kano, Lagos, and Enugu located in three regions of Nigeria. Although the campaigns were directed largely to urban audiences, data were also gathered from a rural community close to each city to assess campaign penetration in rural areas. Approximately 1,500 men and women of reproductive age were interviewed for the baseline and another 1,500 for the follow-up survey. Three-fourths of the respondents lived in urban areas, two-thirds were married, and about half had at least a secondary education.

The follow-up survey found that the campaigns had reached a majority of the intended audience. Almost 70 percent of all respondents had seen the family planning logo, and 87 percent of them understood its meaning. Two-thirds of respondents recalled at least one PSA either spontaneously or with prompting. Exposure to family planning messages, no matter what the medium, was greater in urban than rural areas. Forty-three percent of urban respondents both correctly interepreted the logo *and* spontaneously recalled a PSA, compared with 19 percent of rural respondents. Television, a major media channel for the campaign, became the leading source of family planning information in urban areas, while radio remained the primary source for rural residents.

Survey results show significant changes in family planning attitudes and behavior over the 6-month period studied. The proportion of respondents holding highly favorable attitudes toward family planning increased from 62 percent at the baseline survey to 70 percent at the follow-up survey. The greatest improvements were made regarding male responsibility for family planning and the positive impact of family planning on marital relationships. At the same time, there was an increase in the proportion of respondents who approved of family planning, who would recommend family planning to someone else, and who believed that their spouses and best friends would approve of their using family planning. Communication about family planning also rose: 44 percent of follow-up respondents reported a recent discussion with their

spouses, compared with 38 percent of baseline resondents. Reported use of contraceptives rose 7 percentage points (25 percent to 32 percent) in six months, with modern methods showing the greatest gains.

Logistic regression was used to assess the relationship between campaign exposure and three family planning outcomes: favorable attitudes toward family planning, communication between spouses, and current contraceptive use. The analysis controlled for many potential confounding factors, including education, age, gender, religion, parity, and ownership of a radio or television set.

Results show that campaign exposure was positively associated with all three outcomes. Respondents with the highest campaign exposure were about four times as likely as their unexposed counterparts to hold favorable family planning attitudes and to have discussed family planning with their spouses in recent months. The results show a classic "dose-response" relationship, with the likelihood of positive attitudes and couple communication increasing with each level of campaign exposure.

High campaign exposure was associated with a twofold increase in current contraceptive use, while moderate exposure was not associated with any increase. This suggests that intense campaign exposure, may be necessary to change behavior, but moderate exposure may be sufficient to change attitudes and stimulate discussion. In other words, while a big communication campaign will have a big impact on behavior, a small campaign may have impact primarily at the intermediate stages in the process of behavior change.

Abbreviations

DHS	Demographic and Health Survey
FHS-I	Nigerian Family Health Services Project
FMOH / DPA	Federal Ministry of Health, Department of Population Activities
FP	family planning
IEC	information, education, and communication
IUD	intrauterine device
JHU / CCP	Johns Hopkins Center for Communication Programs
JHU / PCS	Johns Hopkins University / Population Communication Services
NTA	Nigeria Television Authority
PPFN	Planned Parenthood Federation of Nigeria
PSA	public service announcement
USAID	United States Agency for International Development

Chapter I. Introduction

Mass Media and Family Planning in Nigeria

Well-designed mass-media campaigns have proved their ability to increase the use of family planning in Nigeria. Between 1985 and 1988, television promotion of family planning in the cities of Ilorin, Ibadan, and Enugu helped increase the numbers of new and continuing contraceptive users (Piotrow *et al*., 1990). After the campaign, the number of new clients had almost quintupled in Ilorin, tripled in Ibadan, and more than doubled in Enugu. About half of respondents surveyed reported having seen the family planning messages on television; of these viewers, more than two-thirds recalled the specific clinics promoted.

In Borno State, meanwhile, a mass-media campaign involving radio, television, print materials, and an advocacy forum with religious leaders showed similar results. The number of first-time users in sentinel clinics rose by 24 percent over pre-campaign levels, and the number of continuing users rose 37 percent (Kiragu and Omotara, 1992).

Research in other African countries confirms the strong association between exposure to family planning messages and contraceptive use. According to data from the 1989 Demographic and Health Survey (DHS) in Kenya, women who were exposed to mass-media messages were more likely than their peers who had not been exposed to use family planning and to use a modern method (Westoff and Rodriguez, 1995). Nonusers who had been exposed to family planning messages were more likely to report that they intended to use contraception in the future. Mass-media exposure was also associated with a desire to space or to limit pregnancies.

DHS data from Nigeria report similar findings. The 1990 survey found that ever-use of contraceptives was 8.2 percentage points higher among women who were exposed to family planning messages than among their unexposed counterparts. The gap was even greater, fully 10 percentage points, for current use of contraceptives. As for nonusers, 37 percent of those exposed to family planning messages said that they intended to use contraceptives, compared with only 19 percent of nonusers who had not seen or heard the messages (Bankole *et al*., 1993).

Nigeria is a well-recognized economic and political force in Africa, and, with a population of 98.1 million people, it is the most populous nation on the African continent (PRB, 1994). Because the mass media are fairly widespread in Nigeria, they are an important vehicle for disseminating information about family planning to this large population. Nigeria has 31 daily newspapers, 81 radio transmitters, and 61 television transmitters. There are 171 radios and 27 televisions per 1,000 population—higher ratios than in most sub-Saharan African countries (United Nations, 1992). A survey of predominantly urban areas found that nearly 90 percent of all households have radios and 60 percent own television sets (RMS, 1990). Since almost every state has its own radio and television stations, it is possible to broadcast on a regional as well as a national basis. The Nigeria Television Authority (NTA) is the primary national television station, with affiliates in each state. The affiliates broadcast national programs such as the news from NTA in addition to their own local programming.

The Music and Logo Projects

Between 1988 and 1992, the Information, Education, and Communication (IEC) Division of the Nigerian Family Health Services Project (FHS-I[1]) launched two, complementary, national family planning communication initiatives, the Music Project and the Logo Project (see Table 1). The IEC component of the FHS-1 Project, managed by the Johns Hopkins Center for Communication Programs (JHU/CCP), is charged with increasing the use of family planning by implementing health communication activities at the national, regional, state, and Local Government Area (LGA) levels. To this end, the IEC division has developed and produced a broad range of mass-media materials, including radio, television, film, and folk media programs, as well as newspaper and magazine articles and inserts. It has facilitated the development and distribution of a wide array of print materials and promotional displays for schools, health care facilities, and commercial outlets. In addition, the division has been involved in community mobilization activities, population education in secondary schools, and training of health care providers, journalists, and other professionals playing key roles in family planning communication.

Table 1.
Timetable of Music and Logo Projects' Activities: Nigeria, 1988-1992

Activity	Dates
National Child Spacing Logo Development and Pretest	November 1988 - November 1989
Songs and Video Production *(Phase I, Music Project)*	February 1989 - September 1989
Promotional Tours *(Phase II, Music Project)*	July 1989 - December 1990
National Child Spacing Logo Launch	September 1991
PSAs pretest	December 1991
Print materials distribution began	April 1992
Recognition Phase of Logo Project	April 1992 - August 1993
Baseline Survey	April 1992
Broadcast of Public Service Announcements *(Phase III, Music Project, PSA Project begun)*	June - November 1992
Follow-up Survey	December 1992
Motivational Phase of the Logo Project	May 1994 - present

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).

1 The Nigeria Family Health Services Project (FHS-I) was a 5-year joint initiative of the Federal Ministry of Health (FMOH) and the United States Agency for International Development (USAID). Initiated in 1988, the project aimed to strengthen integrated health care services available through private and public facilities nationwide. The second phase of the project, FHS-2, was launched in 1994.

The Music Project. This project, executed by the Planned Parenthood Federation of Nigeria (PPFN), used the "Enter-Educate" approach pioneered by JHU/CCP to promote family planning and sexual responsibility through popular music. (The term, combining "entertain" and "educate," was coined by JHU/CCP, which has participated in the creation of several dozen Enter-Educate productions in Africa, Asia, and Latin America. See Coleman and Meyer, 1989.) Two family planning songs ("Choices" and "Wait for Me") and accompanying music videos were produced in 1988 during the first phase of the project. King Sunny Ade and Onyeka Onwenu, two of Nigeria's most popular singers, performed the songs. The lyrics encouraged adults to make wise choices about family planning and encouraged youths to be sexually responsible. Within weeks of their release, both songs had reached the top ten on local lists of popular music hits.

Immediately after the songs were released, a second phase of the project worked to promote their social messages. On promotional tours, the artists articulated and promoted the songs' family planning messages, helping audiences to understand the meaning of the lyrics and video images.

In 1992, a third phase of the Music Project used television and radio public service announcements (PSAs) to reinforce the link between the songs and the need to take action regarding family planning. This phase became the PSA Campaign. The PSAs were based on five creative concepts drawn from formative research and addressed a wide range of motivational issues, such as economic well-being, maternal and child health, and early marriage (see Table 2). Different concepts aired on television and radio were recorded in one or more of the five main languages in Nigeria: English, Pidgin, Yoruba, Hausa, and Igbo.

Table 2.
Public Service Announcements' Titles, Languages, Broadcast Area, and Synopsis of Creative Concepts:
Nigeria, 1992

Title and Languages	Broadcast Area	Synopsis
The Compromise (English, Yoruba, Igbo, and Pidgin)	Nationwide	Fearing pregnancy, a wife complains of a headache and rejects her husband's advances. The husband mocks her and says he will get her medicine. On his way to get the medicine, he is confronted by his children, each with a problem—the first has been expelled from school for unpaid fees, the second reminds him that the landlord has called about the rent, and the third says she does not have sports clothes for her classes. The husband realizes that he needs the headache tablets himself. He talks with his wife and they agree to a compromise—to visit the family planning clinic.
Behind the Curtain (Pidgin, Igbo,and Yoruba)	Nationwide	Crowded with his entire family in a one-room apartment, where the numerous children sleep on the floor, Justus rejects his wife's suggestion to plan their family. A timely visit by an "aunt" from the village helps him recognize his responsibilities.
Two Friends (Hausa, English, Igbo, and Yoruba)	Nationwide	Two friends who went to school together meet years later. One still looks as youthful as she used to. The other, who has many children and is currently pregnant, has aged. What is the youthful woman's secret? Child spacing.
Simple Solution (English and Pidgin)	Nationwide	In a clip from the video of the song "Wait for Me," a young woman rejects sexual overtures from her partner because she fears unwanted pregnancy. The man is angry that she always makes excuses and demands that she "do something about it." At this, she turns the tables and asks him, "Why don't YOU do something?" A voice-over advises joint responsibility for family planning and encourages the couple to visit the nearest clinic.
Wise Decision (Hausa)	Northern Nigeria	An underage girl is about to be withdrawn from school so she can marry. A wise older man advises her father to wait until his daughter is older and to let her finish school.

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).

The PSAs were broadcast twice a day on television and about four times a day on radio over a 6-month period from June to November 1992.[2] Regional interests and languages determined the broadcast schedule. Thus, PSAs recorded in Yoruba were broadcast only in Yoruba-speaking southwestern Nigeria; PSAs in Igbo, only in Igbo-speaking southeastern Nigeria; and PSAs in Hausa, only in Hausa-speaking northern Nigeria. English- and Pidgin-language PSAs were broadcast nationwide. All concepts were aired nationwide with the exception of *Wise Decision*, which was developed especially to address the northern region's problem of early marriage. Produced only in Hausa, this spot aired only in the north.

[2] The campaign was designed to end in November 1992. Because the PSAs were so popular, however, various television and radio stations continued to broadcast them after this date.

Organized opposition to the PSA campaign was reported in the northern, predominantly Muslim state of Kano. After the PSAs airing in Kano, a fundamentalist Muslim group that opposes family planning and female education produced and broadcast its own television spots to rebut the messages of the PSA campaign. Activists also tore down campaign posters and print materials displayed on walls. These acts stirred up substantial public debate in the community between campaign supporters and their opponents. The counter-campaign lasted about one month. Southern states—predominantly Christian—reported no organized opposition and were more supportive of family planning.

The Logo Project. With assistance from Insight Communications, Ltd., a Lagos-based advertising agency, and JHU/CCP, the Federal Ministry of Health's Department of Population Activities (FMOH/DPA) developed a family planning logo (see Figure 1). Called the National Child Spacing Symbol, the logo served to identify all government and private family planning initiatives and to mark locations where family planning services and/or advice were available.[3] Logo development began in 1988 with a national contest. From entries submitted by local artists, the symbol deemed best was selected. Between 1989 and 1991, the logo underwent a series of pretests, revisions, and refinements. Finally in September 1991, the Honorable Minister of Transport and Aviation, acting on behalf of the President, launched the logo in a widely publicized national ceremony. In April 1992, Insight Communications and a media distribution company, Klinsite Outdoor Services (later renamed Optimum Exposures Limited), distributed print materials nationwide in a massive effort that placed the logo in all outlets where a person could obtain family planning services. More than 1 million pieces of material were produced and placed, including posters, billboards, crown posters, danglers, bumper stickers, indoor stickers, and novelty items.

The first phase of the Logo Project, the recognition phase, was implemented between April 1992 and August 1993 to introduce the logo and link it to family planning services. Radio and television spots, billboards, posters, and other print materials promoted the new logo and explained its meaning. Because the logo-promotion campaign overlapped the PSA broadcasts, the two became mutually reinforcing. In fact, the televised PSAs featured the logo at the end of every broadcast. During the second, motivational phase of the Logo Project, which began in May 1994, the benefits of family planning were further publicized and people were encouraged to seek services wherever the logo was displayed. As of this writing, additional logo materials continue to be distributed to new outlets, while materials at previously identified outlets are replaced as needed.

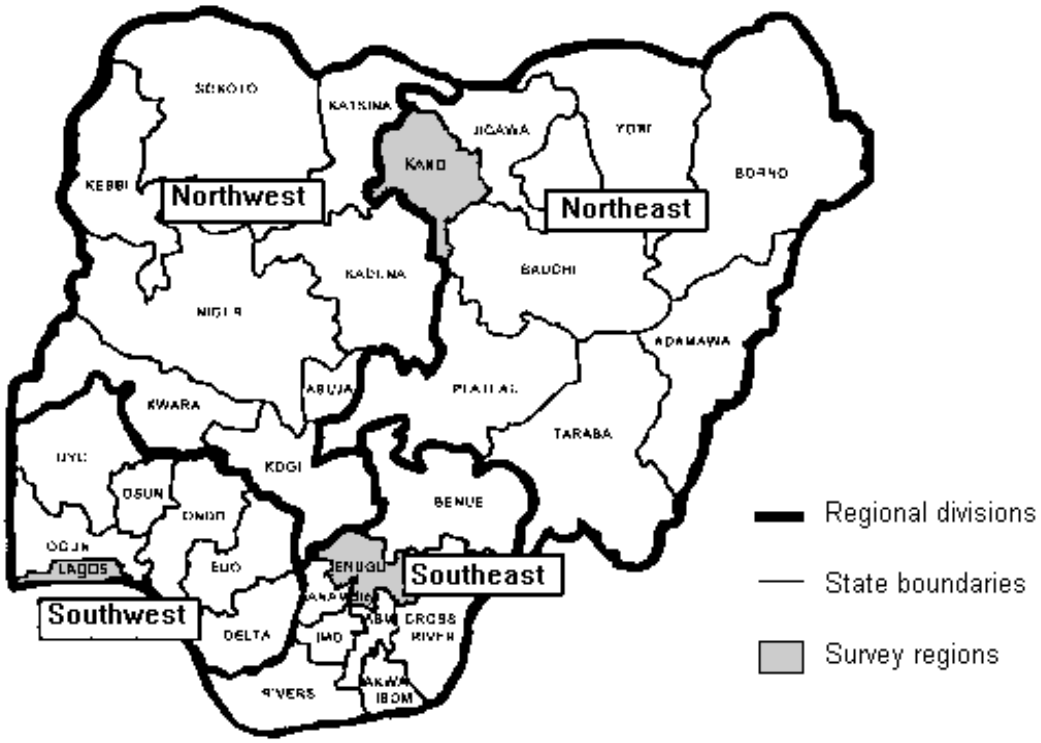
Figure 1.
Nigeria National Child Spacing Logo

[3] See also Kiragu, K., S. Chapman, and G. Lewis, "The Nigeria Family Planning Facility Census," Baltimore, Maryland, Johns Hopkins School of Public Health, Center for Communication Programs, IEC Field Report No. 1, December 1995.

Chapter II. Evaluation of the PSA and Logo Campaigns

Since the PSA and Logo campaigns coincided, both activities were evaluated at once. Baseline and follow-up household surveys were conducted among men and women of reproductive age in three areas in the states of Lagos (in the southwest), Enugu (in the southeast), and Kano (in the north; see Figure 2). The baseline survey was carried out in April 1992—that is, two months before the broadcast of the PSAs and in the same month as national distribution of the logo materials. The follow-up survey took place in December 1992, one month after the PSAs were scheduled to go off the air and mid-way through the 16-month recognition phase of the Logo campaign. In each state, both the capital city and an adjacent rural area were surveyed. The sample for each survey consisted of about 1,500 women and men of reproductive age—that is, women ages 15 to 49 and men ages 15 to 65.[4]

Figure 2.
Map of Nigeria Showing Survey Areas for Nigeria PSA and Logo Campaigns, 1988-1993



[4] The questionnaires used for the surveys can be obtained by writing to the first author of this paper at the address printed on the back cover.

The research design also included a clinic component, with information to be collected before, during, and after the campaign at 24 sentinel sites. Interviews with family planning clients and a monitoring system to record the number of client visits at each site began simultaneously. Managerial, financial, and political problems, however, hampered collection of consistent and reliable data, and this evaluation component was abandoned. The evaluation of the PSA and Logo Campaigns, therefore, has been limited to the two household surveys.

Sampling and Data Collection

To account for the greater heterogeneity of urban areas, the samples were designed to include a cross-section of the urban population. The cities were stratified into four sociodemographic groups: high, upper-middle, lower-middle, and low. These classifications roughly correspond to the residential areas of the elite, mixed, migrant, and traditional population groups.

Each stratum was further divided into equal blocks, and two blocks in each stratum were randomly selected for study. In each block, all households (that is, dwellings with evidence of residential occupancy) were listed. Roughly four times the number of households needed were listed. This provided a large enough pool of potential respondents in the dwellings category to accommodate refusals and not-at-homes and still yield a desirable sample size. The lists from the four strata were assembled, and participating households were selected by systematic sampling.

Respondents for the survey were selected on the day of the interview using a random sampling procedure. In each household, all adults within the study's age limits—15 to 49 years for women and 15 to 65 years for men—were listed, and one among them was randomly selected for the interview. If that person was not available, interviewers were instructed to make two returns before selecting an alternate respondent from the same household. If none were available, a respondent from the back-up sample was selected. In each city, 350 respondents were interviewed, half men and half women. Male interviewers interviewed male respondents, while female interviewers interviewed female respondents.

A somewhat different sampling procedure was used in the rural areas surveyed, which included the villages of Nike (near Enugu), Rimin Gado (near Kano), and Ayobo (near Lagos). Because each of the villages was relatively homogeneous, they were not stratified. Households were listed and participating dwellings were selected by systematic sampling. A respondent at each household was selected in the same manner as for the urban sample.

The baseline sampling frames were retained for use during the follow-up survey, but different households and respondents were selected. This ensured that the two surveys were relatively comparable.

Trained interviewers who lived in the study areas collected the data. Most were university students with backgrounds in research. During two days of training, they learned about the objectives of the survey and the contents of the questionnaire, practiced interviewing in the classroom, and conducted a field trial. The three co-investigators supervised the collection of

the data, one in each area. Additional supervision was provided by a fieldwork coordinator, who was usually a faculty member at the local university with practical experience in research.

Evaluation Framework

Data from the follow-up survey were analyzed in two different ways to assess the impact of the PSA and Logo campaigns on the family planning attitudes, intentions, and behavior of the intended audience. The first approach, based on the Steps to Behavior Change theoretical framework described below, examines the respondents' own reports of actions they took in response to campaign materials. Self-reported outcomes of this type must be interpreted carefully, because they ask respondents to make subjective judgments about the motivation for their actions. A second approach examines the relationship between the intensity of respondents' exposure to the campaigns and their family planning attitudes and behavior. While these results are suggestive, they may be confounded by sociodemographic variables that are linked both with campaign exposure and family planning outcomes. To overcome this limitation, a multivariate analysis of the follow-up survey was conducted. This analysis corrects for confounding factors and provides the most accurate assessment of the relationship between campaign exposure and family planning outcomes.

Steps to Behavior Change. Because different members of the population are at different stages of the decision-making process about family planning, the impact of a communication intervention on different individuals will vary. For persons who know little about family planning, a campaign may create awareness. For persons who have already come to a basic understanding of family planning and considered practicing it, a campaign may provide the determining stimulus to visit a service provider. For persons who already use contraception, a campaign may validate their decisions and prompt them to encourage friends to adopt a method. These stages are best described by the Steps to Behavior Change,[5] a model used for designing and evaluating communication interventions. This model classifies individuals into five major stages of behavior change:

- Knowledge—Recalls family planning messages, understands meaning of family planning, and knows methods and sources of supplies;
- Persuasion—Considers using family planning and thinks others would approve;
- Decision—Intends to seek family planning information and services;
- Implementation—Seeks family planning information and advice and begins to use contraception; and

[5] For further reference, see Rogers, E.M., *Diffusion of Innovations*, 4th edition, New York: Free Press, 1995 or Bertrand, J.T. and Kincaid, D.L., "Evaluating Information, Education, and Information (IEC) Programs, New Orleans, Louisiana: Final Report of the IEC Working Group, The Evaluation Project, Tulane University, forthcoming.

- Confirmation—Experiences benefits of family planning and advocates it for others.

The objectives of communication interventions such as the PSA and Logo campaigns are to graduate persons from one stage to the next and to create an atmosphere that supports the use of family planning. Thus, to gauge the impact of the logo and PSA campaigns on individual behavior, respondents were asked:

- Whether they were exposed to the intervention on radio or television, or whether they had seen the logo,
- Whether they agreed with the message,
- Whether they had discussed the campaign with anyone,
- Whether they had taken any action as a result of seeing and/or hearing the intervention, and
- If so, what action they had taken.

These self-reported outcomes are roughly parallel to the stages of behavior change postulated by the model.

Limitations of the Evaluation

The evaluation results presented in this report cannot be generalized for the entire Nigerian population because of the design of the study. According to design, three-fourths of the respondents in the household surveys were from urban areas, partly because the campaign was targeted for urban residents. Also, the evaluation was limited to the three states identified by the project as those that best represent the diverse Nigerian cultures, but are not representative of the entire nation. By collecting data from the same locations for both the baseline and follow-up surveys, however, the research team improved its changes of drawing data from comparable samples.

The evaluation design used two cross-sectional surveys conducted before and after the campaign. Cross-sectional surveys are limited in their ability to draw causal influences. Thus, the findings presented here are measures of association between the campaign and family planning outcomes. Nevertheless, the use of the behavior change framework, intensity of exposure and comprehension, and multivariate analysis to assess impact strengthen confidence in the study findings. As such, the results are consistent with project outcome expectations and provide useful information for program planners in Nigeria.

Sociodemographic Characteristics of the Sample

The sociodemographic characteristics of the 1,518 respondents to the baseline survey and the 1,493 respondents to the follow-up survey were similar (see Table 3). Respondents were evenly distributed among the states and almost equally divided between men and women. About 69 percent of the respondents lived in urban areas. More than 50 percent were Christian, while about 40 percent were Muslim. About 37 percent were Igbo-speakers, 30 percent were Yoruba-speakers, and 20 percent were Hausa-speakers. More than 85 percent had at least a primary education, and at least 20 percent had a post-secondary education. The overall educational level was slightly, but statistically significant higher ($p<0.01$) among respondents to the follow-up survey than among respondents to the baseline survey.

Most respondents were married or living with partners, but the percentage was significantly lower among respondents to the baseline survey (61 percent) than among respondents to the follow-up survey (67 percent; $p<0.01$). Also, a significantly smaller percentage of baseline respondents than follow-up respondents owned or had access to radios ($p=0.003$), although the vast majority of respondents to both surveys did have access to radios. More than three-fourths of the respondents owned or had access to television sets, with little difference between the two surveys. The mean age of the baseline sample, 32 years, was slightly but significantly higher than the mean age of the follow-up sample, 31 years ($p=0.01$). On average, the men surveyed were several years older than the women.

In summary, the two samples are comparable on most characteristics, with the exception of education, marital status, access to radio, and age. When appropriate, multivariate statistical analysis was used to adjust for these differences.

Table 3.
Percent Distribution of Baseline and Follow-up Survey Respondents, by Sociodemographic Characteristics: Baseline and Follow-up Surveys, Nigeria, 1992

	Baseline Survey (n=1,518)		Follow-up Survey (n= 1,493)	
Characteristic	**Percent**	**Number**	**Percent**	**Number**
Area				
Enugu	33.3	505	30.9	460
Kano	32.7	496	34.4	512
Lagos	34.0	517	34.7	517
Residence				
Urban	68.8	1,038	68.9	1,013
Rural	31.2	471	31.1	456
Gender				
Male	49.0	742	46.9	696
Female	51.0	771	53.1	788
Religion				
Muslim	40.7	612	42.7	629
Christian	56.3	846	55.2	814
Other	3.0	46	2.1	29
Ethnic Group				
Hausa	22.9	344	20.5	306
Igbo	37.5	563	36.2	539
Yoruba	29.8	447	30.3	452
Other	9.8	147	13.0	193
Education*				
None	15.1	227	11.9	177
Primary [a]	25.4	383	27.6	409
Secondary [a]	32.6	492	33.5	496
Post secondary	20.1	302	23.6	349
Other	6.8	102	3.4	51
Marital Status*				
In union[b]	61.2	922	67.1	991
Not in union	38.8	585	32.9	486
Access to Radio*				
Yes	91.9	1,392	94.7	1,376
No	8.1	122	5.3	77
Access to Television				
Yes	77.3	1,158	78.8	1,152
No	22.7	341	21.2	310
Mean Age (years)*				
Men	35.7		33.8	
Women	27.6		27.7	
All	31.5		30.6	

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).

NOTES: Totals may not add up to sample size due to missing values.

[a] Includes Koranic and formal education.

[b] Married or living with a partner.

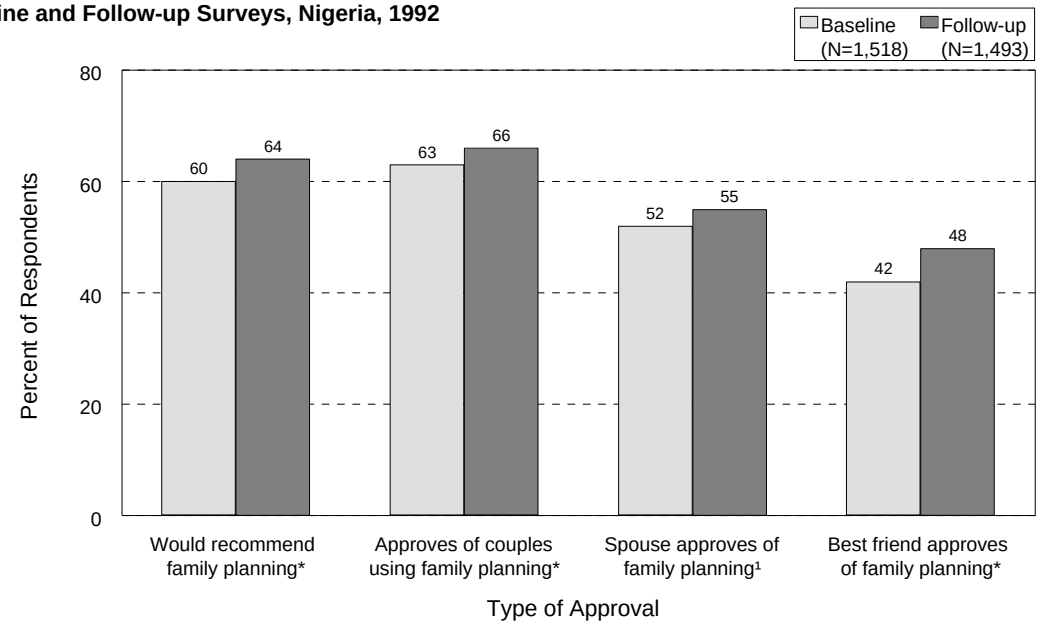
* Difference between baseline and follow-up survey is significant at $p \leq 0.05$.

Chapter III. Attitudes Toward Reproductive Health

Approval of Family Planning

By almost every measure explored, approval of family planning rose consistently and significantly from the baseline to the follow-up survey (see Figure 3). Before the campaigns, 60 percent of respondents said that they would recommend family planning or child spacing methods to others; afterwards 64 percent said they would do so. After the campaign, nearly 66 percent said they approved of couples' using a method to avoid pregnancy—3 percent more than before the campaign. Smaller proportions believed that their spouses and closest friends would approve if they used family planning, but these proportions were greater than before the campaign. The perception of how others feel about family planning is an important issue because it affects individuals' willingness to adopt a contraceptive method. Despite these improvements, about half the respondents still suspected that their partners or best friends disapproved of family planning.

Figure 3.
Respondents' Approval of Family Planning: Baseline and Follow-up Surveys, Nigeria, 1992



SOURCE: JHU/CCP and FHS PSA and Logo Campaigns (1988-1993).
NOTES: *Baseline and follow-up differences significant at p<0.05.
¹ Among married respondents only.

The campaign had a greater impact on women's approval than on men's (see Table 4). Among female respondents, all four indicators of approval rose significantly over the campaign period. In contrast, just two of the four indicators registered a significant increase among male respondents. Both before and after the campaign, a greater proportion of women than men approved of family planning and sensed approval in others.

There was an even greater differential in attitudes according to urban *versus* rural residence. While urban respondents registered significant increases in all four measures of approval, respondents in rural areas registered little or no change (see Table 4). In fact, the campaign widened the already substantial urban/rural gap in approval of family planning. Before the campaign, for example, only 51 percent of rural residents— compared with 64 percent of urban residents—said they would recommend family planning to others. This 13-percentage-point difference increased to 22 percentage points after the campaign (49 percent in rural areas *versus* 71 percent in urban areas). Likewise, before the campaign 36 percent of rural respondents said that their best friends would approve of their using family planning, compared with 45 percent of urban respondents. This 9-percentage-point difference doubled to 19 percentage points after the campaign (35 percent in rural areas *versus* 54 percent in urban areas).

Table 4.
Percent of Respondents Who Approve of Family Planning, by Gender and Residence: Baseline and Follow-up Surveys, Nigeria, 1992

	Men		Women	
Approval of Family Planning	**Baseline** (n=742)	**Follow-up** (n=696)	**Baseline** (n=771)	**Follow-up** (n=788)
Would recommend using FP	56.6	60.3	62.9	67.1*
Approves of couples using FP	57.0	61.3*	68.6	71.0*
Thinks spouse would approve of respondent's using FP[a]	49.5	51.8	51.1	57.0*
Thinks best friend would approve of respondent's using FP	35.7	42.0*	47.7	53.8*

	Urban		Rural	
	Baseline (n=1,038)	**Follow-up (n=1,013)**	**Baseline (n=471)**	**Follow-up (n=456)**
Would recommend using FP	64.1	70.5*	50.8	48.9
Approves of couples using FP	67.4	71.6*	53.2	54.3
Thinks spouse would approve of respondent's using FP[a]	58.5	64.4*	34.7	36.8
Thinks best friend would approve of respondent's using FP	44.7	53.8*	35.5	35.3

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: *Baseline and follow-up differences significant at $p \leq 0.05$.
[a] Among married respondents only.

Interpersonal Communication

To assess the extent of interpersonal communication about family planning, respondents were asked whether they had talked about family planning with their spouses, their best friends, health workers, or other family members during the preceding six months. As Table 5 shows, far more respondents had discussed family planning with their spouses or friends than with health workers or other family members. There were significant increases over the campaign period in the percentage of married women who had spoken to their husbands and in the percentage of men who had spoken to health providers. This is consistent with the messages of the PSA and Logo Campaigns, both of which encouraged couples to talk with each other and to seek help from family planning service providers.

Table 5.
Percent of Respondents Who Discussed Family Planning in the Past Six Months with Other Significant Persons: Baseline and Follow-up Surveys, Nigeria, 1992

	All		Men		Women	
Other Persons	Baseline (n=1,518)	Follow-up (n=1,493)	Baseline (n=742)	Follow-up (n=696)	Baseline (n=771)	Follow-up (n=788)
Spouse[a]	40.7	44.0	44.1	41.3	38.9	46.3*
Best friend	40.1	42.1	35.6	38.5	43.9	45.0
Health worker	19.4	24.9 *	13.4	23.8*	24.8	26.0
Family member	19.9	21.7	17.3	20.3	22.2	22.9

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: * Baseline and follow-up differences significant at $p \leq 0.05$.
[a] Among married respondents only

Attitudes

The household surveys collected detailed data on the respondents' attitudes toward family planning. Men and women were asked whether or not they agreed with 26 statements describing the impact of family planning on the family, individual health and well-being, and marital relations. The statements were largely based on the themes of the campaign's public service announcements. Respondents answered on a five-point Likert scale ranging from strong agreement to strong disagreement, but for analytical purposes the responses have been re-classified into three categories: agree, disagree, and neutral.

Family planning and family well-being. Data suggest that respondents are generally supportive of family planning and feel that it offers social and economic benefits to those who practice (see Tables 6 and 7). After the campaign, there was an increase in the proportion of men who agreed that family planning helps couples to become responsible parents and prepare for children, increases children's educational opportunities, and improves the family's standard of living. Most of the women were already supportive of family planning and registered only slight changes after the campaign.

Table 6.
Percent of Male Respondents Who Agree with Statements about the Benefits of Family Planning for the Family,
by Area: Baseline and Follow-up Surveys, Nigeria, April and December 1992

Statement	Enugu		Kano		Lagos		All	
	Baseline (n=250)	Follow-up (n=233)	Baseline (n=231)	Follow-up (n=233)	Baseline (n=201)	Follow-up (n=230)	Baseline (n=742)	Follow-up (n=696)
FP can help couples to become responsible parents	79.2	72.8	38.3	60.3*	63.8	73.9*	61.2	69.0*
Practicing FP allows couples to prepare for children	83.9	84.1	48.9	64.6*	66.1	73.9*	66.9	74.2*
Children will have better opportunities for education if their parents practice FP	80.0	82.3	54.2	59.0*	70.4	78.7*	68.6	73.4
FP will help improve one's standard of living	82.8	78.0	43.6	52.0*	63.8	72.6*	64.0	67.6

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: * Baseline and follow-up differences significant at $p \leq 0.05$.

Table 7.
Percent of Female Respondents Who Agree with Statements about the Benefits of Family Planning for the Family,
by Area: Baseline and Follow-up Surveys, Nigeria, April and December 1992

Statement	Enugu		Kano		Lagos		All	
	Baseline (n=255)	Follow-up (n=226)	Baseline (n=262)	Follow-up (n=275)	Baseline (n=254)	Follow-up (n=285)	Baseline (n=771)	Follow-up (n=786)
FP can help couples to become responsible parents	90.6	91.4	56.8	61.0	88.8	79.9*	78.5	76.6
Practicing FP allows couples to prepare for children	91.4	88.3	64.9	63.1	84.8	83.8	80.2	77.9
Children will have better opportunities for education if their parents practice FP	89.8	92.4	56.6	56.8	86.1	88.7	77.4	78.6
FP will help improve one's standard of living	89.0	86.6	51.7	53.7	84.8	78.9	75.0	72.3

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: * Baseline and follow-up differences significant at $p \leq 0.05$.

Analysis by area and gender reveals that many respondents in predominantly Muslim Kano remained unconvinced about the benefits of family planning. For example, while almost three-fourths of men in Enugu and Lagos during the follow-up survey felt family planning helps couples to become responsible parents, only 60 percent of their counterparts in Kano agreed.

Although this is significantly higher than the 48 percent of men in Kano who agreed in the baseline survey, it still indicates that nearly 40 percent of adult males in Kano have doubts about the benefits of family planning to family well-being. Similar patterns were found for the remaining three benefits: family planning allows couples to prepare for children; family planning increases opportunities for children's education; and family planning helps improve the standard of living. A similar pattern was observed among women. After the campaign, nearly 80 percent or more of women in Enugu and Lagos agreed with the benefits of family planning to family well-being. Their Kano counterparts, however, were not so convinced—nearly 40 percent still doubted the benefits of family planning.

Despite the relatively low levels in Kano, most increases observed were among men, and brought them to levels similar to those of women (see Tables 6 and 7). For example, the proportion of men in Kano who agreed that family planning helps couples to become responsible parents increased from 38 percent to 60 percent, bringing men closer to the level of women holding this belief; among women, the proportion holding this belief rose from 57 to 61 percent. Similar results were found for men in Kano agreeing with statements regarding preparation for children and improvement to standards of living. In Enugu, over three-fourths of men and four-fifths of women were highly supportive of family planning even before the campaign, and there were only minimal changes after the campaign, with the proportion of men slightly lower than women. Similar patterns were found in Lagos.

Health benefits of family planning. Both men and women showed appreciation of the health benefits of family planning for the mother and child (see Tables 8 and 9). More than three-fourths of men and four-fifths of women agreed that family planning helps a woman to regain strength between pregnancies and protects the health of a mother and her child. More than two-thirds of men and women also agreed that women who have too many children look tired and worn and that using family planning helps women to retain their beauty—a message that was at the heart of the PSA, *Two Friends*. Though all these beliefs were widely held before the campaigns, several still increased appreciably.

Once again, respondents from Kano were less likely to be convinced of the merits of family planning. Even after the campaign, fewer than two-thirds of men and women felt that family planning helped a mother to regain strength before the birth of her next child or that family planning helps to protect the health of mothers or their children. Even smaller proportions associated family planning with a woman's beauty, youthfulness, or physical energy. These levels remained relatively unchanged during the campaign.

In general, women were more likely than men to agree with the various survey statements (recapitulated in Tables 8 and 9) both before and after the campaigns. Men, however, were more likely than women to register positive changes after the campaign. Interestingly, the changes in proportions of men and women in Kano who agreed with the family planning statements were directionally opposite: the proportions for men increased, while the proportions for women decreased. Nevertheless, after the campaign, the proportions of men and women agreeing with the family planning statements were about the same.

Table 8.
Percent of Male Respondents Who Agree with Statements about the Health Benefits of Family Planning for the Family, by Area:
Baseline and Follow-up Surveys, Nigeria, April and December 1992

Statement	Enugu		Kano		Lagos		All	
	Baseline (n=250)	Follow-up (n=233)	Baseline (n=231)	Follow-up (n=233)	Baseline (n=201)	Follow-up (n=230)	Baseline (n=742)	Follow-up (n=696)
FP helps a mother to regain strength before having her next baby	85.2	88.4	55.1	60.5	77.9	83.5*	73.7	77.5*
Child spacing protects the health of mothers	82.8	89.6*	54.2	60.5	73.6	85.9*	70.7	78.7*
Child spacing helps the health of children	81.6	87.5*	53.1	59.0*	66.5	84.4*	67.5	77.0*
A woman who has too many babies looks tired and worn-out	72.8	72.3	44.9	54.2	71.5	75.7*	63.7	67.4*
A woman's beauty lasts longer if she practices FP	75.2	75.0	47.6	55.9	74.4	84.8*	66.4	71.9*
Women who use FP look younger	71.2	73.3	44.9	52.4	52.8	70.9*	56.6	65.6*

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: * Baseline and follow-up differences significant at $p \leq 0.05$.

Table 9.
Percent of Female Respondents Who Agree with Statements about the Health Benefits of Family Planning for the Family, by Area: Baseline and Follow-up Surveys, Nigeria, April and December 1992

Statement	Enugu		Kano		Lagos		All	
	Baseline (n=255)	Follow-up (n=226)	Baseline (n=262)	Follow-up (n=275)	Baseline (n=254)	Follow-up (n=285)	Baseline (n=771)	Follow-up (n=786)
FP helps a mother to regain strength before having her next baby	94.5	92.8	68.7	63.5	91.6	87.7	84.8	80.7
Child spacing protects the health of mothers	91.0	93.2	73.3	64.7*	92.4	90.1	85.5	82.1*
Child spacing helps the health of children	90.6	93.7	76.8	60.6*	90.4	87.3	85.9	79.8*
A woman who has too many babies looks tired and worn-out	83.1	80.3*	58.3	57.1	73.3	77.3	71.5	71.2
A woman's beauty lasts longer if she practices FP	78.8	81.6	59.5	50.0*	88.5	78.5*	75.4	69.4*
Women who use FP look younger	79.5	69.8	50.2	48.0	75.7	68.3	68.3	61.7*

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: * Baseline and follow-up differences significant at $p \leq 0.05$.

Early marriage and female education. The fertility-reducing impact of education for girls and women and the negative health consequences of early childbearing have been well documented. Early childbearing is the norm in northern Nigeria. The 1990 Nigeria Demographic and Health Survey found in the north that nearly 40 percent of women between the ages of 15 and 19 were already mothers or pregnant with a first child. In southern regions, the rates for young women in the same age group were below 15 percent (FOS and IRD, 1992). Likewise, median age at marriage was about 15 years for those in the north, compared with over 18 years for those in the south. According to the Nigeria DHS, education levels among women also are lower in the north—more than 80 percent of northern women never attended school, compared with fewer than 45 percent of their southern counterparts. To discourage early marriage and to encourage female education, an additional PSA, *Wise Decision*, was broadcast in the north.

To assess the impact of *Wise Decision*, respondents were read the statements listed in Tables 10 and 11. Residents of Lagos and Enugu, where the PSA was not aired, largely supported female education, mostly agreeing that girls should be allowed to finish school before getting married and that a husband-to-be should wait for a girl to finish school if he really loves her (see Tables 10 and 11). In Kano, however, despite campaign efforts, fewer respondents were convinced of the benefits of female education and levels did not consistently improve between surveys.

An apparent contradiction emerged in Kano regarding parents' and prospective husbands' positions on young women's schooling and age at marriage. The proportion of men who agreed that parents should allow girls to finish school before marriage dropped markedly from 75 percent before the campaign to 69 percent afterward, while the proportion of women dropped from 80 percent to 64 percent. Over the same period, the proportion of men in Kano who felt that a man would wait for a girl to finish school if he really loves her rose from 60 percent to 67 percent. The proportion of women in Kano who felt likewise rose from 60 percent to 65 percent. The net result, therefore, was a closer agreement between the two genders in Kano. In Lagos and Enugu, men were more supportive than women of female education after the campaign; the pattern for women in these two states was mixed (see Tables 10 and 11). Additionally, respondents in all three states were less likely to appreciate the health dangers to a young girl of early marriage and childbearing than to appreciate the benefits of education. Anywhere from 62 percent to 74 percent of men and 51 percent to 61 percent of women agreed that early childbearing could damage a girl's health.

Table 10.
Percent of Male Respondents Who Agree with Statements about Female Education and Early Marriage, by Area:
Baseline and Follow-up Surveys, Nigeria, April and December 1992

Statement	Enugu		Kano		Lagos		All	
	Baseline (n=250)	Follow-up (n=233)	Baseline (n=231)	Follow-up (n=233)	Baseline (n=201)	Follow-up (n=230)	Baseline (n=742)	Follow-up (n=696)
You should let your daughter finish school before she marries	76.7	86.2*	75.3	69.4	84.7	87.8*	79.0	81.2*
If a man really loves a girl, he will wait for her to finish school	69.2	77.2	59.6	67.3*	77.2	86.1*	69.1	76.9*
Early marriage and childbearing can damage a girl's health	64.0	73.7*	54.2	62.0	67.2	83.0*	62.1	72.9*

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: * Baseline and follow-up differences significant at $p \leq 0.05$.

Table 11.
Percent of Female Respondents Who Agree with Statements about Female Education and Early Marriage, by Area:
Baseline and Follow-up Surveys, Nigeria, April and December 1992

Statement	Enugu		Kano		Lagos		All	
	Baseline (n=255)	Follow-up (n=226)	Baseline (n=262)	Follow-up (n=275)	Baseline (n=254)	Follow-up (n=285)	Baseline (n=771)	Follow-up (n=786)
You should let your daughter finish school before she marries	89.0	89.6	80.3	64.1*	90.4	94.0	86.5	82.3*
If a man really loves a girl, he will wait for her to finish school	83.5	76.5	60.9	65.3*	92.4	92.6	78.7	78.5*
Early marriage and childbearing can damage a girl's health	70.6	51.1*	67.6	57.7	60.6	72.9*	66.3	61.3

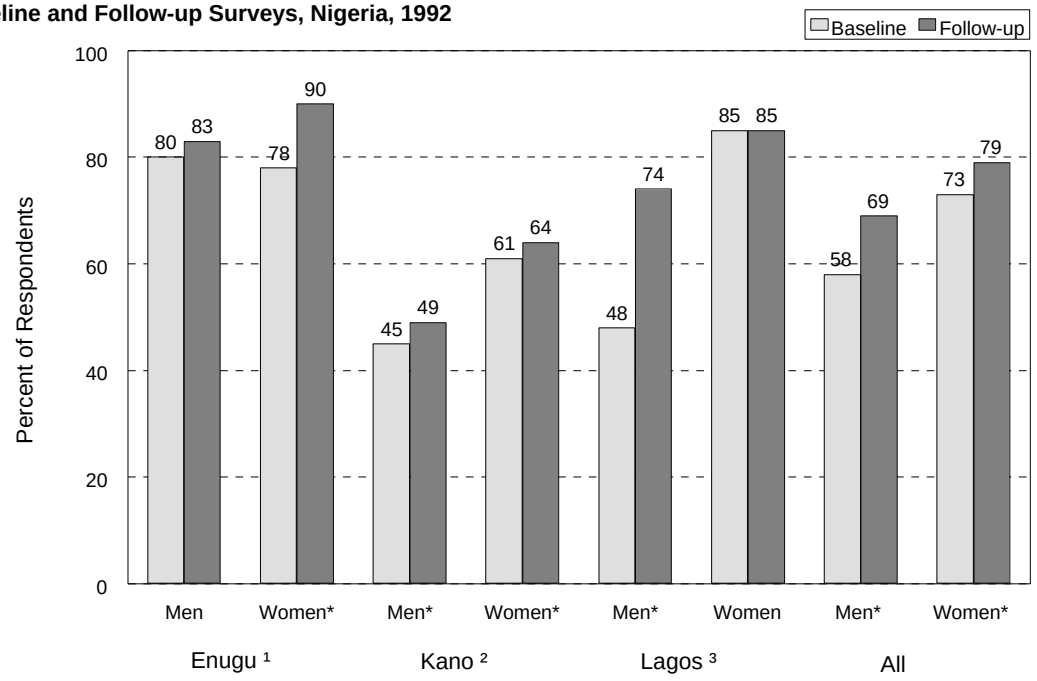
SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: * Baseline and follow-up differences significant at $p \leq 0.05$.

Men and family planning. The PSAs *Simple Solution, The Compromise,* and *Behind the Curtain* encouraged men to share responsibility for family planning with their partners. To assess changes in attitude on this issue, respondents were asked whether they agreed with the statement: "Men should share the responsibility for family planning." Before the campaign, 66 percent of respondents agreed. This proportion increased to 74 percent after the campaign. The greatest changes in the proportions of men and women who believed men should share the responsibility for family planning were reported in Lagos (66 percent to 80 percent) and Enugu

(79 percent to 86 percent). Kano respondents also reported an increase (53 percent to 58 percent); however, there remained more than two-fifths of respondents who still did not agree that men should share responsibility for family planning. Overall, the changes indicate a potential for communication interventions to increase the numbers of couples who believe men should play an active part in family planning.

When analyzed by gender, the data show that women were slightly more likely than men to agree that men should take more responsibility for family planning, especially after the campaign (see Figure 4). Both men and women registered relatively high levels of support for men's roles in family planning. Even in Kano, where levels of support were the lowest, at least half of both men and women showed support of men's taking a role in family planning.

Figure 4.
Respondents Who Agree Men Should Share Responsibility for Family Planning, by Gender and Area: Baseline and Follow-up Surveys, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: * Baseline and follow-up differences significant at p<0.05; significant levels reflect changes in the percentages of all three responses during the campaign.
[1]Baseline n=505; Follow-up n=460. [2]Baseline n=496; Follow-up n=512. [3]Baseline n=517; Follow-up n=517. Sample sizes for "All" are weighted.

Family planning and marital stability. The surveys also explored the impact of family planning on relations between husband and wife. Results indicate a general improvement in attitudes toward family planning and marriage. Agreement with each one of the six survey statements rose significantly (see Tables 12 and 13). There were increases, for example, in the proportions of men and women who felt practicing family planning brings a couple closer together, lets a couple love one another with peace of mind, and contributes to a happy family. While there were gains in all three areas, Kano registered the largest increases, and men—especially those in Kano—registered the greatest gains, although still not reaching the proportion among women. Even after the campaign, however, respondents in Kano remained less enthusiastic about family planning than their counterparts in other states.

Despite these gains, attitudes toward family planning and marital relations remained less positive than perceptions about the impact of family planning on health and economic well-being. A possible interpretation might be once family planning obviates the risk of pregnancy, men and women seem to fear that individuals will have less incentive to remain faithful. Such fears may be of special concern in a polygamous society such as Nigeria's, where a husband may seek another wife if he is displeased with his current one. Women therefore may be reluctant to use family planning if they believe it will upset their husbands. Further communication interventions are needed to address widespread concerns about the effect of contraception on marital stability.

Table 12.
Percent of Male Respondents Who Agree with Statements about the Benefits of Family Planning for Marital Relations, by Area: Baseline and Follow-up Surveys, Nigeria, April and December 1992

Statement	Enugu		Kano		Lagos		All	
	Baseline (n=250)	Follow-up (n=233)	Baseline (n=231)	Follow-up (n=233)	Baseline (n=201)	Follow-up (n=230)	Baseline (n=742)	Follow-up (n=696)
Spouses who care for each other will practice FP	74.0	78.5	40.1	54.0*	62.6	70.4*	59.5	67.7*
A husband who loves his wife will allow her to practice FP	65.6	76.7*	37.9	54.6*	57.3	68.3*	54.1	66.6*
The practice of FP will bring a couple closer together	61.2	66.4	42.7	58.1*	52.8	66.5*	52.5	63.7*
With FP a couple can love one another with peace of mind	70.4	69.8	41.4	55.5	56.5	69.1	56.6	64.8*
A couple that practices FP has a happy family	67.6	78.5*	41.9	58.1*	65.2	71.3*	58.8	69.3*
Having a large family strains a couple's relationship	44.0	52.0	24.7	38.4*	52.4	54.4*	40.9	48.3*

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: * Baseline and follow-up differences significant at $p \leq 0.05$.

Table 13.
Percent of Female Respondents Who Agree with Statements about the Benefits of Family Planning for Married Couples, by Area: Baseline and Follow-up Surveys, Nigeria, April and December 1992

Statement	Enugu		Kano		Lagos		All	
	Baseline (n=255)	Follow-up (n=226)	Baseline (n=262)	Follow-up (n=275)	Baseline (n=254)	Follow-up (n=285)	Baseline (n=771)	Follow-up (n=786)
Spouses who care for each other will practice FP	86.7	91.0	53.7	59.1	80.9	81.0	73.6	76.2
A husband who loves his wife will allow her to practice FP	82.4	90.6*	46.7	55.1*	74.5	79.9	67.7	74.3*
The practice of FP will bring a couple closer together	78.8	85.6	47.3	53.7*	72.4	72.2	66.1	69.6
With FP a couple can love one another with peace of mind	87.5	83.0	48.7	58.0*	78.5	82.0	71.4	73.8*
A couple that practices FP has a happy family	87.5	86.4	55.6	59.5*	80.1	82.8	74.3	75.7
Having a large family strains a couple's	72.6	61.7*	37.5	50.7*	55.4	61.6	55.0	57.8*

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).

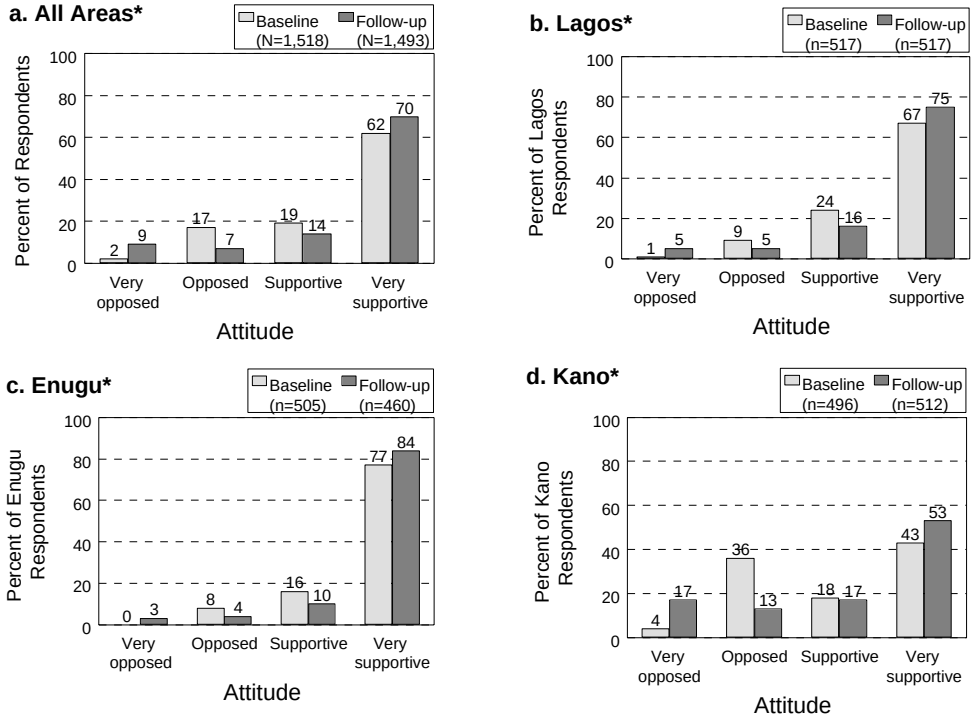
A 53-point attitude score was developed to summarize each respondent's attitudes toward family planning. One point was awarded for each response supportive of family planning; one point was deducted for each response indicating opposition; each neutral response earned no points. The scale ranged from -26 points (most opposed) to +26 points (most supportive). Respondents were then classified into four groups: highly opposed (-26 to -12 points), opposed (-12 to -1 points), favorable (0 to +12 points), and highly favorable (+12 to +26 points). Before the campaigns four of every five respondents were reported as either "supportive" or "very supportive" of family planning (see Figure 6). During the campaign period, positions shifted toward the extremes, with the proportions highly opposed and highly favorable both showing gains at the expense of the middle categories. The net effect, however, was a gain, as the mean attitude score rose from 12.9 in the baseline survey to 13.8 in the follow-up survey ($p=0.04$).

A regional analysis showed that the shift in attitudes was concentrated in Kano (see Figure 5). The proportion of respondents highly opposed rose from 4 percent in the baseline survey to 17 percent in the follow-up survey; this outweighed the change in the proportion highly favorable, which increased from 43 percent to 53 percent. In contrast, attitudes in Lagos and Enugu changed less markedly and were more likely to move toward strong support than strong opposition.

The proportion of respondents holding very positive attitudes toward family planning increased among every segment of the population during the campaign period, although some gains were greater than others (see Table 14). Women were far more supportive of family planning than men before the campaigns. This gender gap almost disappeared, however, as support among men increased substantially during the campaigns and women's support remained static. The disparity between the attitudes of urban and rural respondents widened during the campaign from 14 percentage points to 20 percentage points because greater gains were made in urban than rural areas. There was also a positive association between education and rising support for family planning: The more educated the respondents, the greater the increase in the percentage with highly favorable attitudes. Since highly educated respondents supported family planning more even before the campaign, this meant the gap between educational levels widened.

Table 14.
Percent of Respondents Who Held Highly Favorable Attitudes Toward Family Planning, by Selected Characteristics: Baseline and Follow-up Surveys, Nigeria, 1992

Figure 5.
Respondents' Attitudes Toward Family Planning, by Area: Baseline and Follow-up Surveys, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaign (1988-1993).
NOTE: * Differences significant at p<0.01.

Characteristic	Baseline (n=1,518)	Follow-Up (n=1,493)
Gender		
Male	55.0	69.3*

Female	69.4	70.7*
Residence		
Urban	66.6	76.0*
Rural	53.3	56.4*
Education		
None	37.4	40.0*
Primary	56.9	63.1*
Secondary	70.9	78.4*
Post-secondary	74.2	84.0*

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: *Baseline and follow-up differences significant at $p \leq 0.05$.

Chapter IV. Knowledge and Use of Contraceptive Methods

Contraceptive Knowledge

Respondents were asked to name every family planning method of which they were aware. If a method was not mentioned, the interviewer would prompt the respondent with a description and ask if the respondent had heard of it. There were 13 methods: eight modern and five nonmodern.[6] Contraceptive knowledge changed little between surveys (see Table 15). This was expected because the campaigns were designed to promote the concept and approval of family planning, not methods.

Before and after the campaigns, more than 90 percent of respondents could name at least one contraceptive method spontaneously or after prompting. Respondents knew an average 3.2 methods before and after the campaign. Urban respondents had heard of almost twice as many methods as their rural counterparts. The results varied even more widely by education, with uneducated respondents naming only one or two methods compared with five methods named by those with post-secondary education.

Table 15.
Percent and Mean Number of Respondents' Assisted Knowledge of Family Planning Methods, by Gender, Residence, and Education: Baseline and Follow-up Surveys, Nigeria, 1992

Family Planning Method	Baseline (n=1,518)	Follow-up (n=1,493)
Any method	92.5	94.0
Any modern method	88.9	89.8
Any nonmodern method	84.7	87.2*
Mean Number of Methods Known		
Gender		
Male	3.4	3.3
Female	3.0	3.1
Residence		
Urban	3.7	3.7
Rural	3.0	3.1
Education		
None	2.0	1.3*
Primary	2.3	2.3
Secondary	3.0	3.2
Post-secondary	5.5	5.2
All	3.2	3.2

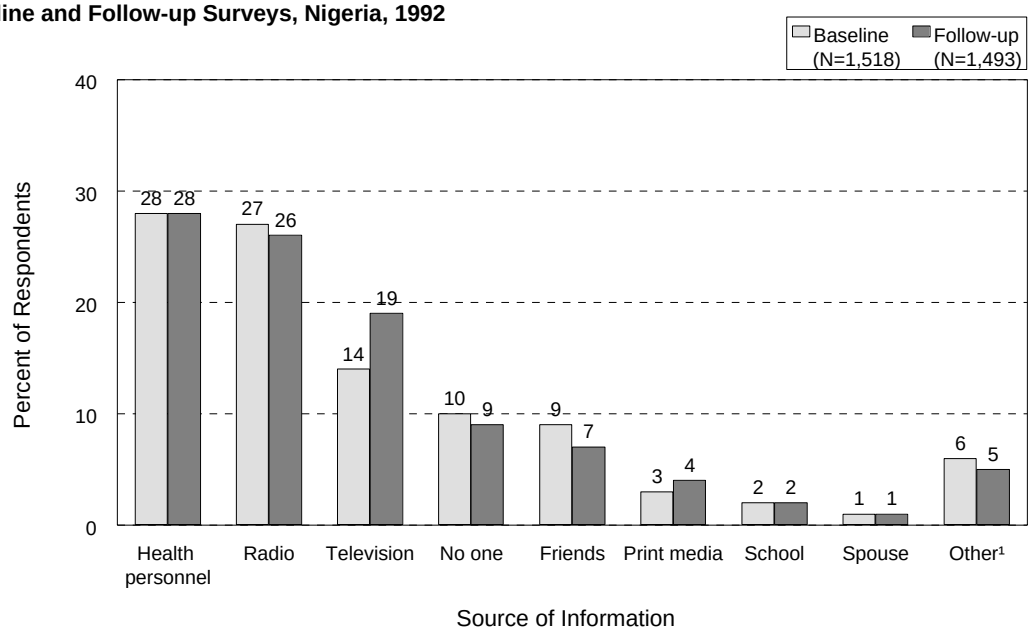
SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: * Baseline and follow-up differences significant at $p \leq 0.05$.

[6] Modern methods included female and male sterilization, injectables, pills, IUDs, condoms, diaphragms, foaming tablets. Non-modern methods included safe period (Billings, rhythm methods, etc.), withdrawal, abstinence, and folk methods (two allowed).

Sources of Information

The surveys also identified which sources of information respondents relied upon for their knowledge of contraceptive methods. Each respondent named her or his main source of information on child spacing and family planning methods. As Figure 6 shows, the leading source of information, named by 28 percent of respondents in both baseline and follow-up surveys, is health personnel (including doctors, nurses, outreach workers, community health workers, family planning clinic providers, and other hospital- or clinic-based sources). Nearly as many respondents cited radio. There was little change in the importance of either of these information sources between the two surveys. In contrast, there was a substantial increase in reliance on television, with 14 percent of baseline respondents citing television compared with 19 percent of follow-up respondents. Primarily because of the increasing importance of television, there was a statistically significant difference in sources of information before and after the campaign (p=0.01).

Figure 6.
Respondents' Primary Sources of Family Planning Information: Baseline and Follow-up Surveys, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: ¹ Includes relatives, community or public meetings, and similar sources.

Why did the importance of television increase but not that of radio, when the PSA and Logo Campaigns used both broadcast media? It may be that radio audiences switched to television or, perhaps even more likely, that people exposed to both radio and television were more likely to

recall the highly visual television messages.

The relative importance of information sources differed in urban and rural areas (see Table 16). City dwellers most often cited health workers, then television and radio. While the importance of health workers and radio remained relatively static, at about 30 percent and 21 percent respectively, there was a clear increase in the proportion of respondents citing television (which rose from 16 percent to 24 percent). In fact, television surpassed radio as the major source of information on family planning in the follow-up survey. Because of this change, the difference between baseline and follow-up sources of information became statistically significant (p=0.03).

In contrast, radio outweighed all other sources of information in rural areas; it was cited by nearly 38 percent of respondents in the follow-up survey. Health personnel, while important, run a distant second; they were named by 22 percent of rural residents. Radio may play a greater role in disseminating family planning information in rural than urban areas because of more limited access both to family planning providers and to other media, such as television and print. There was little change in the sources of information reported by rural respondents between the two surveys (p=0.9).

Table 16.
Percent Distribution of Respondents' Source of Family Planning Information, by Residence:
Baseline and Follow-up Surveys, Nigeria, 1992

	Urban *		Rural *	
Source of Information	**Baseline (N=956)**	**Follow-Up (N=980)**	**Baseline (N=432)**	**Follow-Up (N=427)**
Health personnel[a]	30.4	29.2	22.4	21.8
Radio	20.7	20.8	39.6	37.7
Television	16.1	23.7	8.1	9.1
Friends	9.8	7.5	6.9	5.9
No one source	9.5	7.1	10.9	14.0
Print	4.1	4.2	1.6	1.9
School	2.9	2.2	1.2	0.9
Spouse	1.2	1.3	1.2	0.7
All others[b]	5.3	4.0	8.1	8.0
TOTAL	100.0	100.0	100.0	100.0

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: [a] Includes doctors, nurses, outreach workers, community health workers, family planning clinic providers, and other clinic/ hospital-based sources.
[b] Includes relatives, community or public meetings, and similar sources. Each included less than 3 percent of respondents.
* Baseline and follow-up differences for urban and rural subsamples significant at $p \leq 0.05$.

The relative importance of information sources also varied by gender (see Table 17). Health providers remained the main source of family planning information for women—twice as many women (36 percent) as men (18 percent) cited health personnel —presumably because women routinely see health care providers for prenatal, postnatal, and child care, and because they obtain most of their contraceptive methods from health facilities. For men, radio was the leading source of information, cited by 31 percent of men in the follow-up survey compared with 21 percent of women. Only television showed a marked change over the course of the campaign

among both genders. The percentage of men citing television as their main source of information rose sharply from 11 percent to 18 percent. Among women, the percentage increased from 16 to 20. Differences in sources of information before and after the campaign were statistically significant for both genders, primarily because of the increases among those citing television as a source.

Table 17.
Percent Distribution of Respondents' Source of Family Planning Information, by Gender:
Baseline and Follow-up Surveys, Nigeria, 1992

	Men *		Women *	
Source of Information	**Baseline (N=669)**	**Follow-up (N=679)**	**Baseline (N=725)**	**Follow-up (N=745)**
Health personnel [a]	19.0	17.6	36.1	36.2
Radio	32.3	30.6	21.4	21.3
Television	10.9	18.0	16.0	20.0
No one	13.6	9.9	6.6	8.5
Friends	9.3	6.9	8.4	7.0
Print media	4.8	6.2	1.9	1.1
School	3.1	2.7	1.7	1.2
Spouse/partner	0.9	0.7	1.4	1.5
All others [b]	6.1	7.4	6.5	3.2
TOTAL	100.0	100.0	100.0	100.0

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: * Baseline and follow-up differences significant at $p \leq 0.05$.
[a] Includes doctors, nurses, outreach workers, community health workers, and FP clinic providers or other clinic/hospital-based sources.
[b] Includes community or public meetings, relatives, and other sources.

Contraceptive Use

Current contraceptive use increased over the campaign period, moving from 25 percent to 32 percent. A nearly 50 percent increase in the use of modern methods (17 percent to 25 percent) accounts for this change (see Table 18). The level of use of nonmodern methods changed little, moving from 12 percent to 14 percent. The condom was the most commonly used method in both surveys, followed by the pill, natural family planning, withdrawal, and injectables. The use of condoms, pills, and injectables rose much more sharply between surveys than did the use of natural family planning or withdrawal, suggesting a shift toward use of modern methods.

Contraceptive use by both genders rose significantly—25 percent to 31 percent for men and 24 percent to 33 percent for women. Among men and their partners, condom use registered the greatest gains, rising from 12 percent to 17 percent. Other methods that rose significantly in level of use among men and their partners were the pill, injectables, and foaming tablets. Among women and their partners, use of several methods increased slightly.

Table 18.
Percent of Respondents Currently Using a Modern or Nonmodern Family Planning Method: Baseline and Follow-up Surveys, Nigeria, 1992

	Men [a]		Women [a]		All	
Method	Baseline (n=742)	Follow-up (n=696)	Baseline (n=771)	Follow-up (n=788)	Baseline (n=1,518)	Follow-Up (n=1,493)
Any method	24.9	30.8*	24.3	33.0*	24.5	32.0*
Any modern method	17.4	26.2*	17.4	24.5*	17.3	25.1*
Condom	11.6	17.4*	6.4	8.6	8.9	12.7*
Pill	4.3	7.5*	8.3	9.6	6.3	8.6*
IUD	3.2	3.0	3.6	5.6	3.4	4.4
Injectables	2.3	5.3*	3.6	4.8	3.0	5.0*
Foam	0.7	1.9*	0.7	1.5	0.7	1.7*
Female sterilization	0.8	1.0	0.5	1.0	0.7	1.0
Diaphragm	0.7	1.3	0.3	0.5	0.5	0.9
Male sterilization	0.4	0.3	0.0	0.4*	0.2	0.3
Any nonmodern method	12.8	15.2	11.5	13.2	12.1	14.3
Natural family planning [b]	6.6	7.6	5.3	5.7	5.9	6.6
Withdrawal	5.9	6.3	4.9	5.4	5.4	5.8
Periodic abstinence [c]	5.4	3.3	2.2	2.2	3.8	2.8
Folk methods [d]	6.8	1.3	1.0	1.4	0.9	1.3

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: [a] Use refers to contraception by respondent or partner.
[b] Safe period, Billings method, calculation, and calendar.
[c] Includes postpartum abstinence or prolonged periods of sexual inactivity.
[d] Herbs and other traditional medicines.
Percentages are based on the entire sample.
*Baseline and Follow-up differences significant at $p \leq 0.05$.

Levels of current contraceptive use were higher in urban than rural areas, but there were statistically significant increases for both groups over the campaign period ($p<0.01$ for urban, $p=0.01$ for rural) (see Table 19). Contraceptive use was positively associated with education, and respondents with secondary education registered by far the greatest increase in current contraceptive use (22 percent to 38 percent, $p<0.01$). The slight increases in contraceptive use among the other educational groups were not statistically significant.

As can be expected, those with the most education had the highest level of contraceptive use, while those with the greater opportunity for campaign exposure but a lower initial level of use have the greater likelihood of increasing contraceptive use in response to a mass-media campaign. In this particular study, respondents with post-secondary education showed the highest rate of contraceptive use both before and after the campaign; those with secondary education reported the greatest gains in contraceptive use after the campaign.

Further analysis of contraceptive use also indicates that, during the campaign, use among men or their partners rose sharply, especially among men in rural areas, younger men, Kano residents, and men with secondary education (see Table 19). The pattern for women was somewhat similar—increased use was greatest among younger women and women with secondary education. After the campaign, contraceptive use for the total sample remained higher in urban

areas, although rural areas achieved the greater gains.

Table 19.
Percent Distribution of Respondents Currently Using Any Contraceptive Method, by Selected Characteristics [a]; Baseline and Follow-up Surveys, Nigeria, 1992

	Men		Women		All	
Characteristic	**Baseline (n=742)**	**Follow-up (n=696)**	**Baseline (n=771)**	**Follow-up (n=788)**	**Baseline (n=1,518)**	**Follow-up (n=1,493)**
Residence						
Urban	29.7	34.4	26.5*	36.3*	28.0	35.2*
Rural	13.4	21.8*	20.2	25.0	17.2	23.7*
Age group						
15-29	18.1	32.1*	19.3	30.7*	18.8	31.1*
30-65	28.8	30.2	32.4	36.2	30.1	32.7
State						
Enugu	29.6	35.2	27.8	29.7	28.7	32.4
Kano	18.2	30.0*	24.1	27.3	21.2	28.3*
Lagos	26.4	27.0	20.9	41.1*	23.6	34.8*
Education						
None	2.5	9.3	11.5	15.7	8.4	13.6
Primary [b]	20.0	13.6	22.0	29.1	20.9	23.0
Secondary [b]	24.5	40.1*	20.7	35.2*	22.4	37.5*
Post-secondary	38.9	43.3	47.8	48.2	42.7	45.6
All	24.9	30.8*	24.3	33.0*	24.5	32.0

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: [a] Use refers to contraception by respondent or partner.
[b] Formal or Koranic School
* Baseline and follow-up differences significant at $p \leq 0.05$.

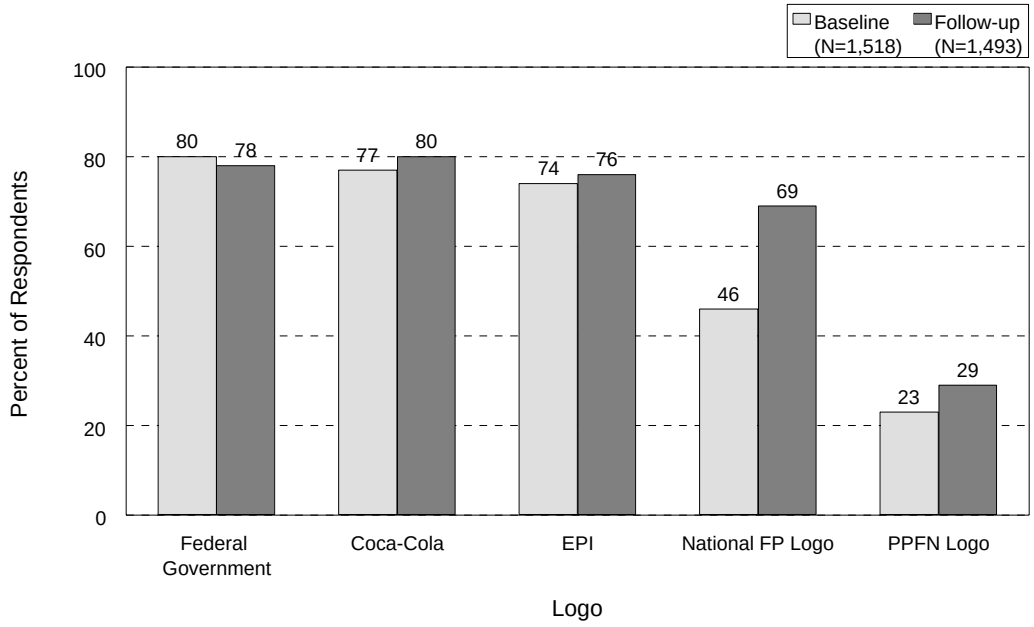
Chapter V. Campaign Exposure

The National Child Spacing Symbol

To assess exposure to the Logo Campaign, interviewers showed respondents several common logos, asking which they had seen and what was their meaning. Because the both campaigns also promoted the Planned Parenthood Federation of Nigeria (PPFN), the PPFN logo was included with the National Child Spacing Symbol and the logos of the federal government, the Expanded Program on Immunization, and Coca-Cola®.

As Figure 7 shows, about 69 percent of follow-up survey respondents reported seeing the national family planning logo, and 29 percent reported seeing the PPFN logo. In comparison, between 76 percent and 80 percent reported seeing the other three logos. While exposure to the logos not representing family planning remained relatively constant, there were substantial increases in the percentage of respondents who had seen the National Child Spacing Symbol and, to a lesser extent, the PPFN logo.

Figure 7.
Respondents' Logo Recognition:
Baseline and Follow-up Surveys, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).

Of the respondents to the baseline survey, 46 percent reported seeing the National Child Spacing Symbol, even though nationwide distribution of logo materials did not begin until April 1992, just before the baseline survey was conducted. This may be because the logo had already been distributed in some locations—especially in Lagos— during the national launch ceremony in September 1991 (see Chapter 1). It is also possible that some respondents guessed they had seen the logo (a problem with all yes/no survey questions). Nevertheless, the clear rise in the proportion of respondents who had seen the family planning logo when compared with all the other logos suggests increasing exposure to and awareness of campaign materials.

Equal proportions of men and women reported seeing the logo (see Table 20). There were distinct differentials by residence and education, however. Half again as many urban respondents as rural respondents reported seeing the logo during the follow-up survey. Similarly, more than two times more respondents with secondary or higher education had seen the logo than respondents with no education.

Table 20.
Percent of Respondents Who Have Seen the National Child Spacing Symbol, by Gender, Residence, and Education: Baseline and Follow-up Surveys, Nigeria, 1992

Characteristic	Baseline (n=1,518)	Follow-Up (n=1,493)
Gender		
Male	43.6	71.1*
Female	49.8	70.6*
Residence		
Urban	49.8	79.4*
Rural	40.8	51.6*
Education		
None	23.2	33.9*
Primary	40.4	62.2*
Secondary	48.9	83.1*
Post Secondary	63.5	86.2*
All	46.3	69.1*

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: * Baseline and Follow-up differences significant at $p \leq 0.05$.

Of the 1,031 respondents to the follow-up survey who reported seeing the National Child Spacing Symbol, 87 percent correctly interpreted it to mean family planning. This level of understanding provides assurance of little misreporting of logo exposure. Respondents were only slightly less able to interpret the PPFN logo correctly: 73 percent of viewers did so. This compares with 100 percent for the Coca-Cola logo, 89 percent for the federal government logo, and 91 percent for the EPI logo.

Follow-up survey respondents also reported where they had seen the National Child Spacing Symbol. Hospitals, open public spaces (where billboards and outdoor posters are placed), and on television were the sites most often mentioned (see Table 21).

Table 21.
Percent of Respondents Who Saw the National Child Spacing Symbol at Various Locations: Follow-up Survey, Nigeria ,1992

Location	Respondents (n=1,031)
Hospital	56.9
Open public spaces	49.1
Television	46.1
Radio	27.0
Health center or family planning clinic	18.6
Doctor's office or private clinic	12.5
Newspaper	11.8
Commercial business (e.g., pharmacy or store)	10.2
On a vehicle	7.9
PPFN clinic	5.4
At someone's home	5.2

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: Percentages total more than 100 because multiple responses were permitted.
Other locations mentioned include community center and school, each reported by fewer than 5 percent of respondents.

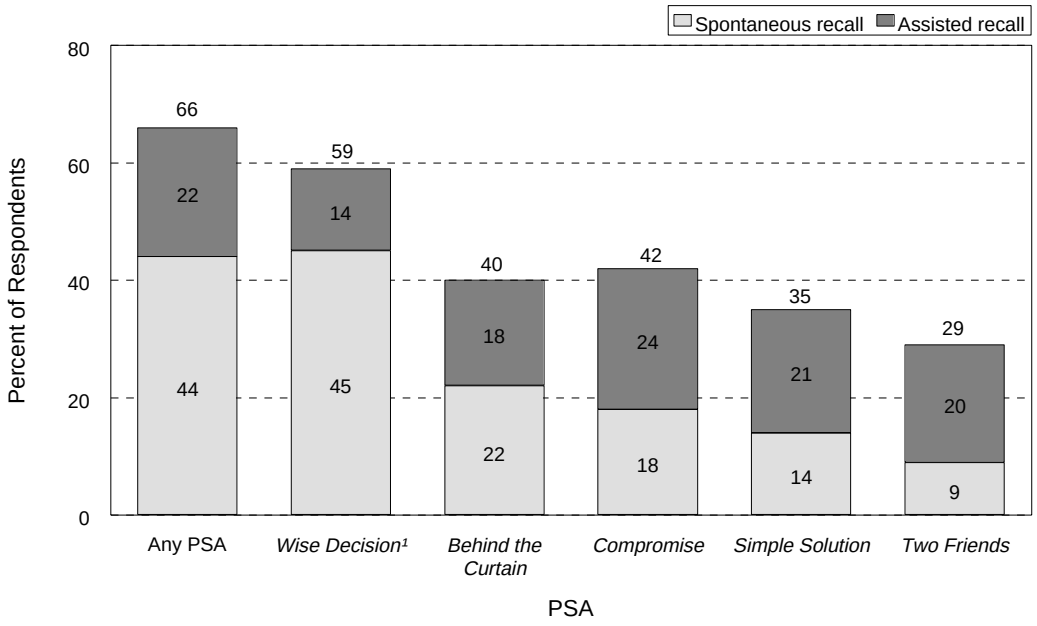
Public Service Announcements

To assess exposure to the PSAs, interviewers asked respondents to describe all advertisements about family planning that they had recently heard on radio or seen on television. Then the interviewers prompted the respondents with descriptions of any PSAs that were not mentioned spontaneously. Because the PSA *Wise Decision* was aired only in the north, exposure was calculated only for respondents in Kano.

Of all respondents, 44 percent could recall at least one PSA spontaneously. With prompting, this number increased to 66 percent (see Figure 8). The PSA recalled by the greatest proportion of respondents was *Wise Decision*, which 59 percent of respondents in Kano remembered. Recall of this PSA may have been heightened by a wave of religious protest by a small but vocal group who felt that *Wise Decision* put too much emphasis on the education of women. As described earlier, this opposition group produced television spots countering the PSA's message that aired after every broadcast of *Wise Decision* over a 1-month period. Data suggest that the controversy heightened public interest in the issue and may actually have increased recall to the PSA.

Other PSAs were recalled by 30 percent to 40 percent of respondents with slight differences between genders (see Table 22). Men were more likely to recall spontaneously the *Wise Decision* and *Behind the Curtain* PSAs—an indication of success, since they were specifically intended for men. Women were more likely than men to recall spontaneously *Two Friends*, probably because this spot promoted child spacing to maintain youthfulness and was specifically intended for

Figure 8.
Respondents' Spontaneous and Assisted Recall of Various PSAs: Follow-up Survey, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: N=1,493
¹ Kano only

women. Overall, women were more likely than men to recall any PSA (68 percent *vs.* 64 percent). Of respondents who recalled PSAs, the majority said they agreed with the PSAs' messages.

Table 22.
Percent of Respondents Who Recalled Specific PSAs, by Gender: Follow-up Survey, Nigeria, 1992

PSA	Men (n=696)		Women (n=788)	
	Spontaneous Recall	Spontaneous and Assisted Recall	Spontaneous Recall	Spontaneous and Assisted Recall
Wise Decision	46.8	61.0	42.6	57.8
Behind the Curtain	24.0	39.5	19.9	40.7
Compromise	18.7	43.7	16.9	41.5
Simple Solution	14.9	36.5	12.9	34.5
Two Friends	7.6	24.1	10.0	32.8
Any PSA	43.1	63.5	44.4	67.6

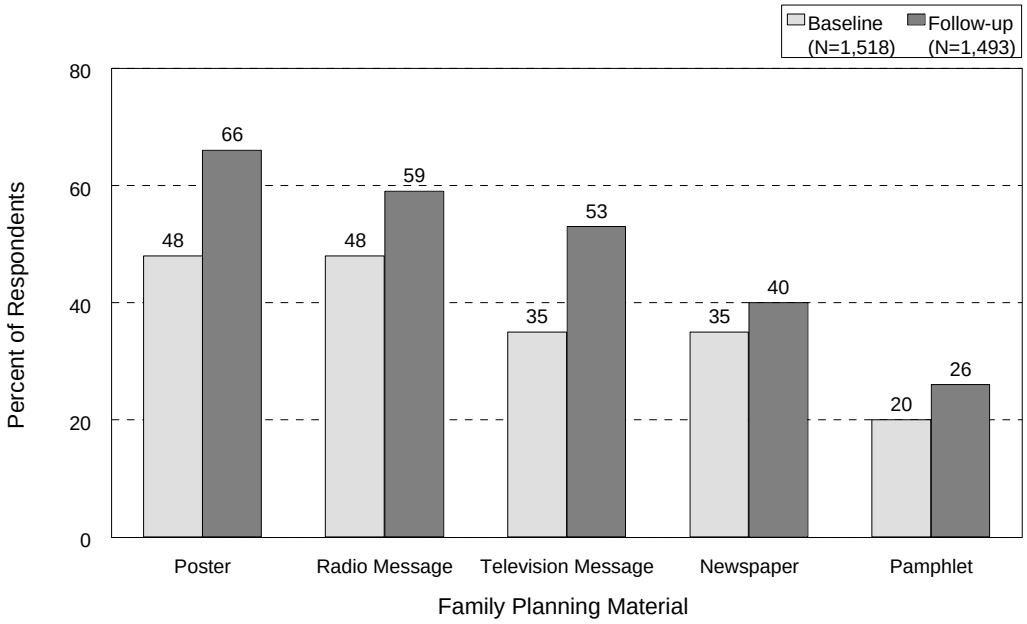
SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).

Radio, Television, and Print

More than half of the follow-up survey respondents reported seeing or hearing family planning messages on posters (which includes billboards, crown posters, door stickers, and the like), radio,

and television (see Figure 9). Smaller percentages reported seeing family planning information in the newspaper or in a pamphlet. No attempt was made to distinguish between materials produced by the PSA and Logo Campaigns and materials from other sources. At the time of the follow-up survey, however, the PSA and Logo Campaigns had a commanding presence throughout Nigeria and probably accounted for most of the materials seen and heard. While the proportion of respondents exposed to family planning materials of all kinds rose significantly during the campaign period, exposure to television showed the greatest increase.

Figure 9.
Respondents Exposed to Various Family Planning Materials: Baseline and Follow-up Surveys, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).

After the campaign, 53 percent of respondents reported seeing a family planning television broadcast, compared to only 35 percent during the baseline survey. The frequent airing of the PSAs over a 6-month period clearly contributed to these increases.

Exposure to family planning materials varied both by gender and by residence. More men than women were exposed to each type of material, with the exception of television (see Table 23). For both genders, posters were the dominant medium to which respondents had been exposed, followed by radio and television, suggesting a wide distribution of print materials. A greater proportion of city dwellers were exposed to every sort of material than were rural residents. Among rural respondents, radio, closely followed by posters, were most seen. In urban areas,

posters were reported by the greatest percentage of respondents, and television received as much exposure as radio.

Table 23.
Percent of Respondents Who Heard Family Planning Messages in Various Media, by Gender and Residence: Follow-up Survey, Nigeria, 1992

	Gender		Residence	
	Male	**Female**	**Urban**	**Rural**
Source of Exposure	(n=696)	(n=788)	(n=1,013)	(n=456)
Posters [a]	69.8*	62.2*	73.9*	47.2*
Radio	63.2*	54.7*	62.6*	49.8*
Television	51.7*	53.6	64.2*	27.9*
Newspapers	47.7*	33.1*	49.7*	19.3*
Pamphlets	32.6*	21.2*	32.5*	13.2*

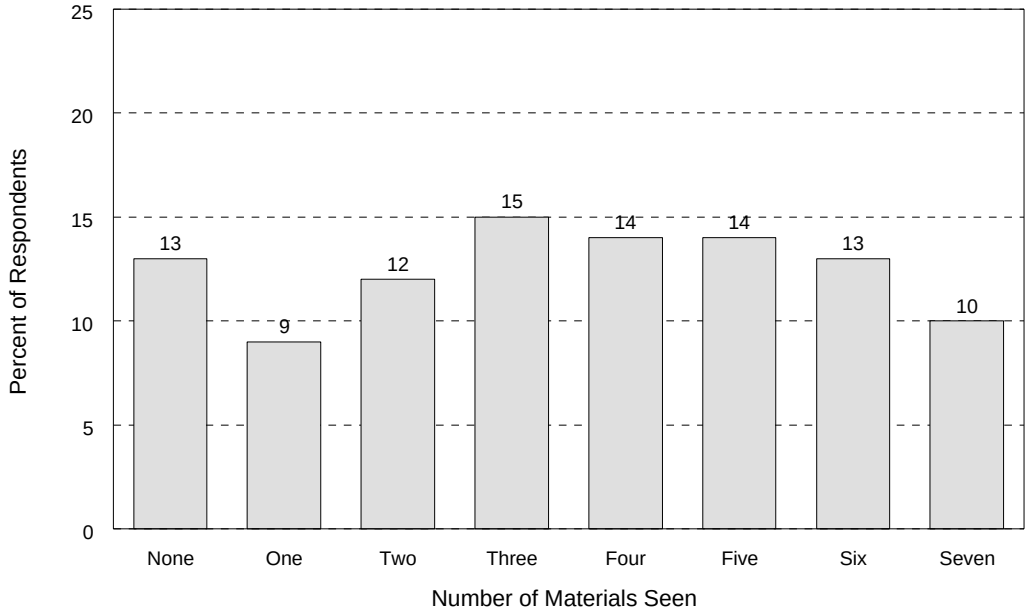
SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: [a] Includes billboards, crown posters, door stickers, and similar print materials pasted on a surface.
*Male/female and urban/rural differences significant at $p \leq 0.05$.

Respondents were asked to describe what they had heard on radio or seen on television about family planning. The interviewers then related the description to the specific broadcasts produced by the PSA and Logo Campaigns. Data reveal that 59 percent of all follow-up respondents reported hearing about family planning on the radio with 46 percent of the total follow-up sample specifically describing campaign radio spots. Data also reveal similar results for television—53 percent of the total follow-up sample reported seeing family planning messages on television and 42 percent described campaign television spots.

Intensity of Exposure

The number of family planning materials to which respondents were exposed provides a simple measure of the intensity of their exposure to family planning campaigns. Seven elements were considered: exposure to family planning messages in the five media (posters, pamphlets, newspapers, radio, and television), recognition of the logo, and spontaneous recall of a PSA. As Figure 10 shows, only 13 percent of follow-up respondents had not been exposed to any family planning messages. More than half of the respondents were exposed to at least four types of materials. Because this measure includes family planning materials not produced by the campaigns, it may overestimate campaign exposure. It does, however, provide a good measure of general exposure to family planning messages in the media.

Figure 10.
Number of Family Planning Materials Respondents Had Seen: Follow-up Survey, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: N=1,493

On average, respondents were exposed to 3.5 materials. Exposure varied significantly by selected demographic characteristics (see Table 24). Men were exposed to more materials than women. Respondents in urban areas were exposed to twice the number of materials as their rural counterparts. Younger respondents were slightly more likely to report exposure than older respondents. Respondents living in Lagos reported exposure to the most materials, followed by Kano and then Enugu residents. There were sharp differences by education—those with post secondary education were exposed to nearly four times the number seen by those with no education. Users were exposed to a mean number of 4.5 materials compared to 3.0 among nonusers.

Table 24.
Mean Number of Family Planning IEC Materials Seen, by Selected Characteristics: Follow-up Survey, Nigeria, 1992

Characteristic	Sample Size	Mean Number
Gender*		
Male	696	3.8
Female	788	3.3
Residence*		
Urban	1,013	4.1
Rural	456	2.3
Age group *		
15-29	771	3.7
30-65	706	3.4
Area *		
Enugu	460	3.3
Kano	512	3.5
Lagos	517	3.8
Education *		
None	177	1.3
Primary [a]	409	2.7
Secondary [a]	496	4.3
Post secondary	349	4.7
Other [b]	51	2.9
Family planning use		
Current users	477	4.5
Nonusers	1,016	3.0
All respondents	1,493	3.5

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: *Demographic differences significant at $p \leq 0.05$.
[a] Includes Koranic and formal school.
[b] Includes polytechnic schools, vocational institutions, adult studies, etc.

Comprehension and Recall

Simple exposure to family planning materials does not guarantee that a person understood or paid attention to their messages. A second gauge of campaign exposure was used to assess audience comprehension of materials and their ability to recall them.

Level of exposure was assessed using a point system. Respondents scored 1 point if they could correctly interpret the National Child Spacing Symbol and 1 point if they could recall at least one PSA spontaneously. Persons who could do neither scored 0 points and were considered unexposed. Individuals who could do either one or the other scored 1 point and were considered moderately exposed, while those able to do both scored 2 points and were considered highly exposed. Because this measure defines exposure as spontaneous recall of a PSA and correct interpretation of the logo, it is a far more conservative measure of exposure than the total number of IEC materials seen or heard. Thus it probably underestimates true campaign exposure.

According to this measure, 26 percent of respondents registered as unexposed, 39 percent as moderately exposed, and 35 percent as highly exposed to the campaign (see Table 25).

This recall- and comprehension-based measure shows that exposure was far greater among respondents who lived in urban areas, were younger, resided in Lagos, had a higher level of education, and were currently using contraception. There was little difference in exposure between men and women.

Table 25.
Percent Distribution of Respondents, by Exposure to PSAs and Logo: Follow-up Survey, Nigeria, 1992

	PSA/Logo Exposure			
Characteristic	**None**	**Moderate**	**High**	**Total**
Gender				
Male	25.7	38.7	35.6	100.0
Female	26.0	39.9	34.1	100.0
Residence*				
Urban	15.9	41.7	42.4	100.0
Rural	47.6	33.8	18.6	100.0
Age group *				
15-29	21.3	41.6	37.1	100.0
30-65	30.7	36.8	32.5	100.0
Area *				
Enugu	31.1	42.4	19.5	100.0
Kano	27.5	33.2	39.3	100.0
Lagos	19.2	35.7	44.1	100.0
Education *				
None	61.0	29.9	9.1	100.0
Primary [a]	35.7	43.8	20.5	100.0
Secondary [a]	14.5	39.9	45.6	100.0
Post-secondary	9.7	38.7	51.6	100.0
Other [b]	45.1	38.3	21.6	100.0
Family planning use *				
Current users	13.2	36.5	50.3	100.0
Nonusers	32.0	40.5	27.5	100.0
All	26.0	39.2	34.8	100.0

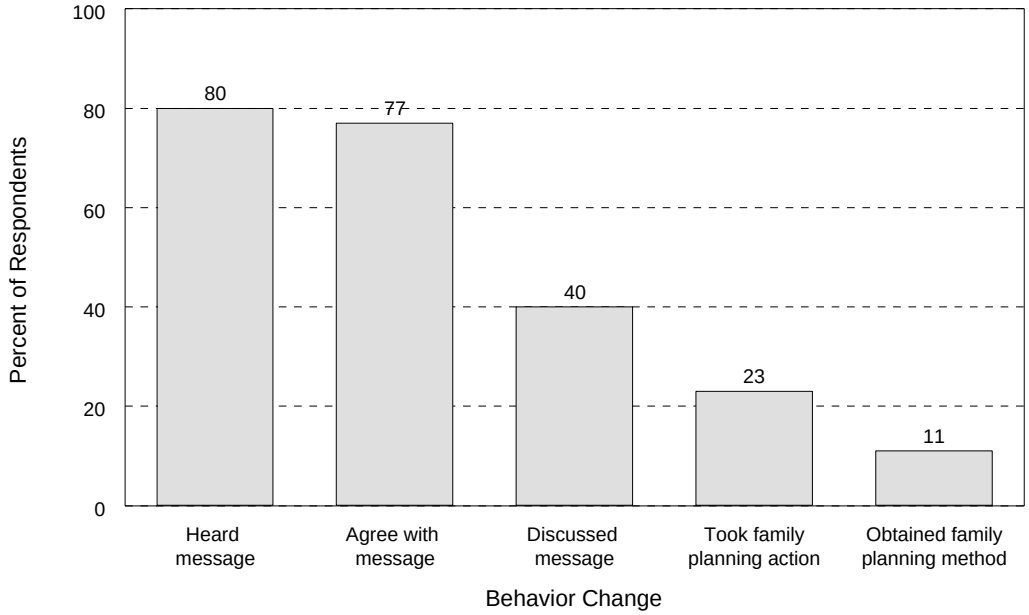
SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: * Demographic differences significant at $p \leq 0.05$.
[a] Includes Koranic and formal schools.
[b] Includes polytechnic schools, vocational institutions, adult studies, etc.

Chapter VI. Impact of Campaign

The impact of the PSA and Logo campaigns was assessed following the Steps to Behavior Change theoretical framework (see Chapter II). This framework states that persons do not adopt a behavior instantaneously, but rather they go through a series of steps and evaluations before taking an action. In the case of contraceptive behavior, the first step may be exposure to family planning information; the second step may be personal assessment of the information; the third step may be talking to someone else; the fourth step may be seeking additional information; and eventually to using contraceptives and advocating use to others.

Findings from the Nigeria PSA and Logo Campaigns roughly follow this theoretically predicted pattern. The Steps to Behavior Change model would generally find that the number of people affected by a campaign diminishes as the outcome progresses toward taking actions. About four-fifths of respondents were exposed to the campaign; three-fourths agreed with the message; and just over one-tenth reported obtaining a family planning method as a result of their campaign exposure (see Figure 11).

Figure 11.
Self-Reported Behavior Change as a Result of Overall Campaign Exposure: [1]
Follow-up Survey, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: N=1,493
[1] Exposed to campaign on radio or television or saw logo.

Intensity of Exposure and Family Planning Behavior

The second approach used to assess the impact of the campaign used the two measures of exposure developed earlier, one based on the number of materials seen or heard by a respondent and the other, on comprehension and recall. Both measures of exposure show a statistically significant and positive association with a variety of outcomes (see Table 26). The greater the number of respondents reporting exposure according to either measure, the higher the incidence of:

- Positive attitudes toward family planning,
- Discussion of family planning with spouses in the preceding six months,
- Intention to practice family planning (if not currently using it), and
- Current contraceptive use.

Table 26.
Percent Distribution of Respondents' Family Planning Behavior, by Two Measures of Campaign Exposure:
Follow-up Survey, Nigeria, 1992

	Number of materials			PSA/Logo Exposure		
Outcome	0 (n=188)	1-3 (n=544)	4-7 (n=761)	None (n=388)	Moderate (n=585)	High (n=520)
Have positive FP attitudes	48.4	80.7	95.5*	65.0	87.0	95.4*
Have discussed FP with spouse[a]	4.1	30.6	63.7*	15.1	38.8	70.3*
Intend to use FP[b]	18.4	48.9	63.2*	32.8	50.0	70.2*
Are using FP	3.7	25.2	43.8*	16.2	29.7	46.2*

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: [a] Among married respondents only
[b] Among respondents who are not currently using FP
* Relationship between exposure and family planning outcome significant at $p \leq 0.05$

Multivariate Analysis

The third approach to assessing campaign impact uses multivariate analysis. Sociodemographic variables such as education and residence may confound the association between campaign exposure and family planning behavior. For example, educated people and city dwellers, who were more likely to use family planning than were other people, were also more likely to have been exposed to the campaign. To control for the effect of these confounding variables, a multiple logistic regression analysis was carried out. This technique permits analysis of data with two outcomes (for example, use or nonuse of family planning) while removing the effect of extraneous factors. The following sociodemographic variables were included in the analysis: age, gender, marital status, urban/rural residence, education, religion, number of children, ownership of a radio and/or television set, family planning attitudes, and family planning communication between partners (see Table 27 for operational definitions of each variable). Three types of outcome were examined: family planning attitudes, couple communication, and current use of family planning. Because unmarried respondents may not have regular partners with whom to

communicate and spousal communication was a key control variable in the analysis, multivariate analysis was confined to married respondents.

Table 27.
Operational Definitions and Reference Categories for Variables Included in the Multivariate Analysis,
Nigeria, 1992

Variable	Definition	Reference category
Campaign exposure	*No exposure*—Cannot spontaneously recall a PSA and cannot correctly interpret logo *Moderate exposure*—Can recall a PSA spontaneously OR knows meaning of logo *High exposure*—Can recall a PSA spontaneously AND knows meaning of logo	No exposure
Age	Reported age in years, continuous	
Education	Highest level of education attained, classified as *None or Primary* (formal or Koranic) *Secondary or above* (formal or Koranic)	None/Primary
Gender	Respondent's gender	Female
Residence	*Urban*—Respondents from Lagos, Kano, or Enugu town *Rural*—Respondents from Ayobo, Rimin Gado, or Nike	Rural
Religion	Self-reported faith, reclassified as Christian, Muslim, or Other (Other excluded because of interpretive heterogeneity)	Christian
Number of children	Number of the respondents' own children alive. Classified into two groups— *1-4 children* and *No children or 5 or more children*[a]	O or 5 or more
Ownership of Radio/TV	Whether household has a working radio and/or television set. Classified into two groups— *Owns neither or just one* and *Owns both*	Owns neither/one
FP Attitudes	Measured by 26 attitudinal questions. Classified as: *Positive* (scores between +1 and +26) *Negative* (scores between 0 and -26)	Negative
Currently using FP	Whether respondent or respondent's partner is currently using a contraceptive method or taking some action to avoid pregnancy. Includes traditional, local methods.	Nonusers
Discuss FP with spouse	Whether respondent has talked about family planning with spouse in past six months.	Not talked

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: [a] Reference group includes respondents with no children and with five or more children because data show these groups have

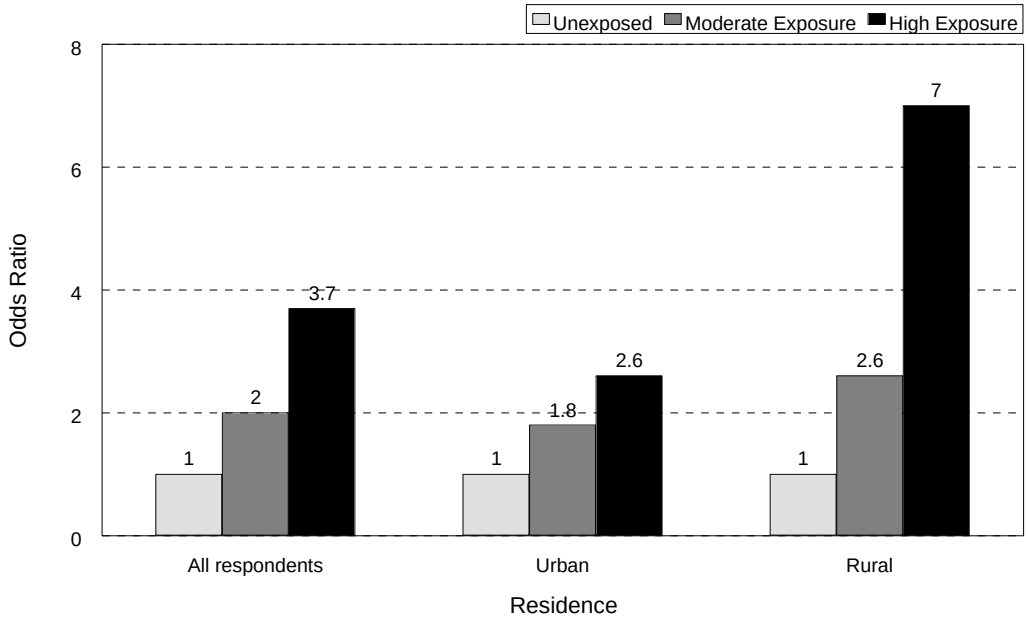
Odds ratios are used to measure the association between different factors in multivariate analysis. The odds ratio compares the likelihood of an outcome, such as contraceptive use by persons who were and were not exposed to the campaigns. When odds ratios are calculated, one group is designated as the reference category group to compare against all other groups. The reference category group is assigned the value of 1.00. An odds ratio greater than 1.00 indicates an outcome was *more likely* among that group than the reference category group. Conversely, values less than 1.00 indicate an outcome was *less likely* in that group than the reference category group. An odds ratio of 1.00 indicates an outcome was just as likely in that group as the reference category group. Because odds ratios compare two numbers, they indicate not only the direction of relationship but also its magnitude. The closer a value is to 1.00, the less difference in the behavior of the two groups. (See Appendix A for more detailed explanation.)

Attitudes. There was a strong relationship between exposure to both campaigns and family planning attitudes (see Figure 12). When the odds ratio is adjusted for all the sociodemographic variables discussed earlier, respondents with high campaign exposure proved to be nearly four times as likely to hold positive family planning attitudes as those not exposed. With moderate campaign exposure, respondents were twice as likely to hold positive attitudes as the unexposed.

The association between campaign exposure and family planning attitudes was especially strong in rural areas. In rural areas, respondents with high exposure were 7.0 times as likely to hold positive attitudes as their unexposed counterparts; in urban areas, the odds ratio was only 2.6. This may be caused, in part, by "message overload" in urban areas—respondents may be exposed to too much other marketing and advertising communication to be especially attentive to these campaigns.

Logistic regression analysis results also reveal the extent to which other sociodemographic factors were associated with family planning attitudes (see Table 28). After adjustment, there was no association between family planning attitudes and age, urban-rural residence, gender, or education. Religion, however, did exert influence; Muslim respondents were more likely to hold

Figure 12.
Odds Ratios of Positive Attitudes of Family Planning Among Married Respondents and Campaign Exposure: Follow-up Survey, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: N=991
Control variables include: age, education, residence, gender, spousal communication, religion, parity, radio/TV ownership, and family planning use.

negative attitudes than Christian respondents. Respondents with up to four children were more supportive of family planning than were either respondents with no children (who presumably had not yet begun to think about planning their family) or respondents with five or more children (whose large family size may reflect a more traditional outlook among Nigerian families). Ownership of both radio and television sets was positively associated with favorable family planning attitudes. Not surprisingly, the most significant correlate of favorable family planning attitudes was current use.

Table 28. Odds Ratios of Favorable Family Planning Attitudes Among Married Respondents by Campaign Exposure and Sociodemographic Variables, Follow-up Survey, Nigeria, 1992

	Adjusted Odds Ratio[a] and 95% Confidence Interval		
Variable	**Urban (n=592)**	**Rural (n=305)**	**All (n=909)**
Campaign exposure			
None	1.0	1.0	1.0
Moderate	1.8(0.9-3.6)*	2.2(1.2-4.3)*	2.0(1.2-3.2)*
High	2.6(1.0-6.6)*	7.0(1.7-28.9)*	3.7(1.8-7.7)*
Age	1.0(1.0-1.0)	1.0(1.0-1.1)	1.0(1.0-1.0)
Education			
None/primary	1.0	1.0	1.0
Secondary/Post secondary	1.9(1.0-3.6)	0.6(0.3-1.6)	1.3(0.8-2.1)
Gender			
Female	1.0	1.0	1.0
Male	0.5(0.3-1.0)	0.7(0.3-1.4)	0.6(0.3-0.9)
Residence			
Rural	—	—	1.0
Urban	—	—	0.9(0.5-1.5)
Religion			
Christian	1.0	1.0	1.0
Muslim	0.2(0.1-0.4)*	0.2(0.1-0.3)*	0.2(0.1-0.3)
Number of children			
0 or 5 or more	1.0	1.0	1.0
1-4	2.1(1.1-3.9)*	1.5(0.8-2.9)	1.7(1.1-2.7)*
Ownership of radio/TV			
Owns none or one	1.0	1.0	1.0
Owns both	1.9(1.0-3.7)*	2.2(0.0-5.3)*	2.0(1.2-3.4)*
Currently using FP			
No	1.0	1.0	1.0
Yes	13.9(4.3-46.0)*	9.9(2.2-43.7)*	24.1(3.1-187.8)*
Talked with spouse about FP			
No	1.0	1.0	1.0
Yes	5.9(2.5-14.1)*	2.4(0.7-7.9)	4.7(2.3-9.5)*

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: Outcome: positive attitudes=1, negative attitudes=0.
[a] Odds ratios adjusted for all the variables in the model.
*$p \leq 0.05$, based on Z statistic for the significance of the regression coefficient.

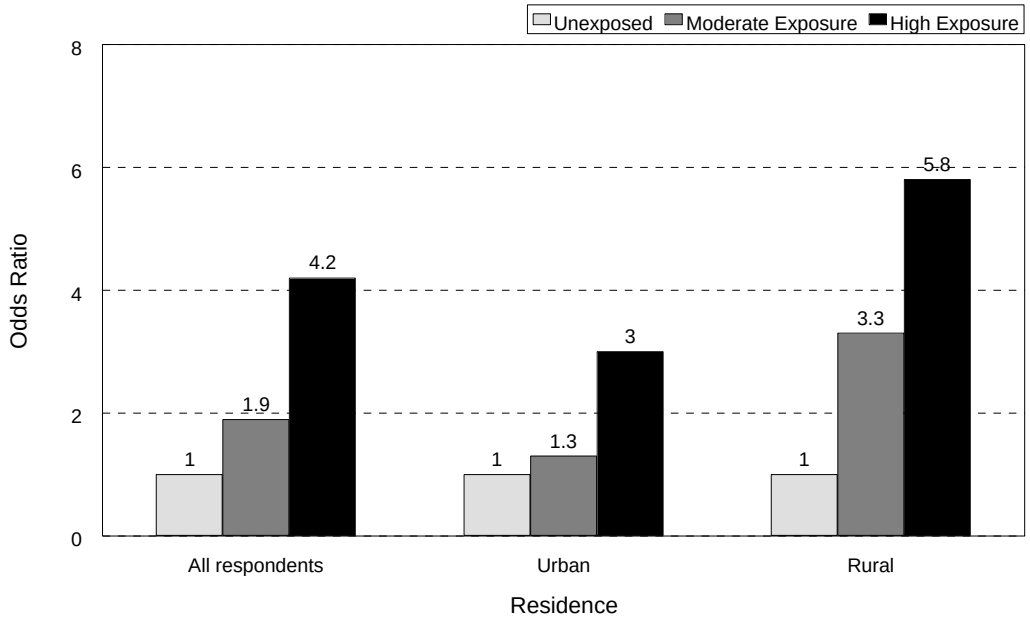
Spousal communication. Spousal communication about family planning was also highly correlated with favorable attitudes; respondents who had taken the step of discussing family planning with their spouses in the last six months were almost five times more likely to have

positive attitudes as were respondents who had not recently discussed family planning. This association was stronger in urban than rural areas.

Exposure to the PSA and Logo Campaigns was positively associated with couple communication (see Figure 13). With moderate campaign exposure, respondents were almost twice as likely as persons who were unexposed to talk about family planning with their partners; with high exposure, they were four times as likely. While campaign exposure affected spousal communication in both urban and rural areas, the impact was greater in rural areas: rural residents with high exposure to the campaign were nearly six times as likely to have talked to their spouses as were those with no exposure.

Age, gender, religion, number of children, and ownership of radio or television sets were not associated with couple communication after adjusting for confounding factors (see Table 29). Education, however, was positively associated with couple communication. As expected, current

Figure 13.
Odds Ratios of Couple Communication Among Married Respondents in the Past Six Months and Campaign Exposure: Follow-up Survey, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: N=991
Control variables include: age, education, residence, gender, family planning use, religion, parity, radio/TV ownership, and family planning attitudes.

use of family planning and positive attitudes toward family planning showed the strongest link to spousal communication.

Table 29.
Odds Ratios of Couple Communication about Family Planning Among Married Respondents, by Campaign Exposure and Sociodemographic Variables, Follow-up Survey, Nigeria, 1992

	Adjusted Odds Ratio[a] and 95% Confidence Interval		
Variable	All (n=909)	Urban (n=592)	Rural (n=317)
Campaign exposure			
None	1.0	1.0	1.0
Moderate	1.9(1.2-3.0)*	1.3(0.7-2.3)	3.3(1.5-7.2)*
High	4.2(2.5-7.1)*	3.0(1.6-5.9)*	5.8(2.2-15.2)*
Age	1.0(1.0-1.0)	1.0(1.0-1.0)	1.0(1.0-1.1)
Education			
None/primary	1.0	1.0	1.0
Secondary/post secondary	1.7(1.1-2.4)*	1.7(1.1-2.6)*	1.6(0.8-3.3)
Gender			
Female	1.0	1.0	1.0
Male	0.8(0.6-1.2)	0.7(0.4-1.1)	1.5(0.7-3.2)
Residence			
Rural	1.0	—	—
Urban	1.8(1.2-2.7)*	—	—
Religion			
Christian	1.0	1.0	1.0
Muslim	1.2(0.9-1.7)	1.5(1.0-2.3)	0.7(0.4-1.4)
Number of children			
0 or 5 or more	1.0	1.0	1.0
1-4	1.1(0.7-1.5)	1.1(0.7-1.7)	1.0(0.5-2.0)
Ownership of radio/TV			
Owns none or one	1.0	1.0	1.0
Owns both	1.3(0.9-2.0)	1.2(0.7-2.1)	1.5(0.7-2.8)
Currently using family planning			
No	1.0	1.0	1.0
Yes	4.7(3.3-6.7)*	4.9(3.2-7.5)*	5.1(2.5-10.1)*
Family planning attitudes			
Negative	1.0	1.0	1.0
Positive	5.2(2.6-10.4)*	6.8(2.9-15.9)*	3.0(0.9-9.7)

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: Outcome: talked to spouse about family planning in past six months=1, did not talk=0.
[a] Odds ratios adjusted for all the variables in the model.
* $p \leq 0.05$, based on Z statistic for the significance of the regression coefficient.

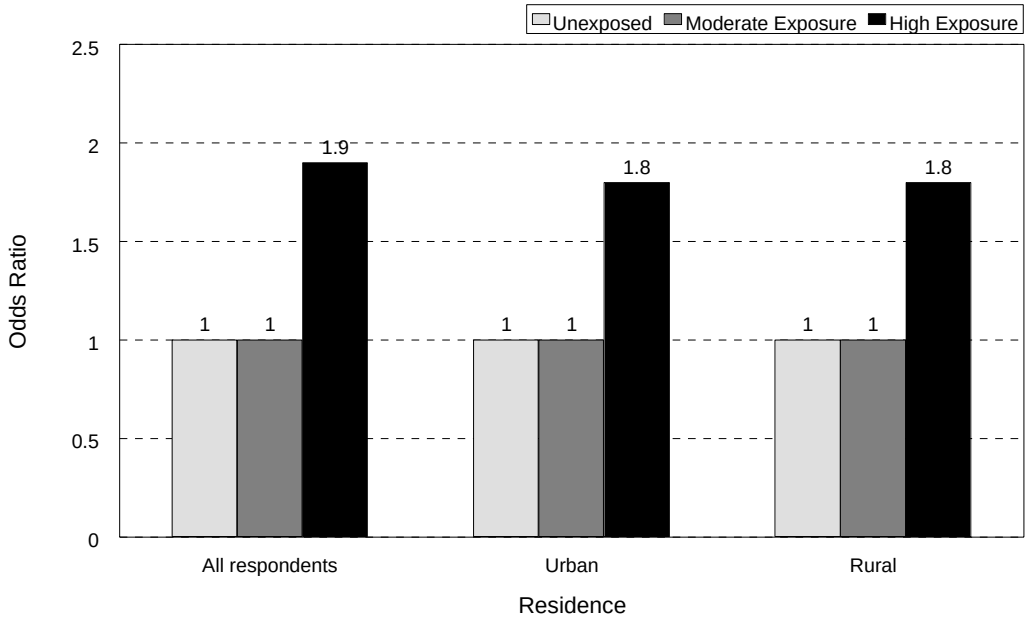
Contraceptive use. High campaign exposure, adjusted for potentially confounding factors, was associated with a twofold likelihood of using contraception (see Figure 14). When broken down by urban and rural areas, the same pattern was observed. Moderate exposure to the campaign, however, did *not* increase the likelihood of using contraception.

Neither age, gender, religion, number of children, nor ownership of radio or television sets were associated with contraceptive use after adjustment for potential confounding factors (see Table

30). Urban/rural differentials also became insignificant in the adjusted model. While men in rural areas were somewhat less likely than women to use contraception, there was no statistically significant difference in urban areas (see Figure 14). Predictably, higher levels of education, favorable attitudes toward contraception, and a recent discussion with one's spouse about family planning all increased the likelihood that a respondent used contraception.

Of particular importance was the finding that owning a radio or television set was not associated with contraceptive use, while campaign exposure was strongly associated with use. This indicates that the key correlate of contraceptive use is *exposure* to the message, not simply owning the equipment.

Figure 14.
Odds Ratios of Current Family Planning Use Among Married Respondents and Campaign Exposure: Follow-up Survey, Nigeria, 1992



SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: N=991
Control variables include: age, education, residence, gender, spousal communication, religion, parity, radio/TV ownership, and family planning attitudes.

In summary, the results of the multivariate analysis suggest that the campaign was positively associated with favorable attitudes toward family planning, couple communication about family planning, and contraceptive use. There was a clear "dose-response" relationship for two of these outcomes—the greater the campaign exposure, the more likely that the respondent held favorable attitudes and had recently discussed family planning with his or her spouse. In contrast, only high campaign exposure was associated with current contraceptive use. People

with moderate exposure to the campaign were no more likely to use contraceptives than those who were unexposed. This suggests that motivating contraceptive use, unlike influencing attitudinal changes or couple communication, requires greater campaign exposure. Since adopting the habit of using family planning requires a change in life style, it calls for more stimulus, motivation, and positive reinforcement than do either a mere change in outlook or a conversation.

Table 30.
Odds Ratios of Current Contraceptive Use Among Married Respondents, by Campaign Exposure and Sociodemographic Variables, Follow-up Survey, Nigeria, 1992

	Adjusted Odds Ratio[a] and 95% Confidence Interval		
Variable	**All (n=909)**	**Urban (n=627)**	**Rural (n=282)**
Campaign exposure			
None	1.0	1.0	1.0
Moderate	1.0(0.6-1.7)	1.0(0.6-1.6)	1.0(0.6-1.4)
High	1.9(1.1-3.3)*	1.8(1.1-3.1)*	1.8(1.2-2.6)*
Age	1.0(1.0-1.0)	1.0(1.0-1.0)	1.0(1.0-1.1)
Education			
None/primary	1.0	1.0	1.0
Secondary/post secondary	1.7(1.2-2.5)*	1.6(1.1-2.3)*	1.6(1.2-2.1)*
Gender			
Female	1.0	1.0	1.0
Male	0.7(0.5-1.1)	0.7(0.5-1.1)	0.7(0.6-1.0)*
Residence			
Rural	1.0	—	—
Urban	0.6(0.4-1.0)	—	—
Religion			
Christian	1.0	1.0	1.0
Muslim	0.8(0.6-1.0)	0.8(0.6-1.1)	0.8(0.6-1.0)
Number of children			
0 or 5 or more	1.0	1.0	1.0
1-4	1.2(0.9-1.7)	1.2(0.8-1.6)	1.2(0.9-1.5)
Ownership of radio/TV			
Owns none or one	1.0	1.0	1.0
Owns both	1.1(0.7-1.7)	1.0(0.6-1.5)	1.0(0.7-1.3)
Family planning attitudes			
Negative	1.0	1.0	1.0
Positive	15.0(4.6-49.0)*	14.9(4.6-48.6)	14.9(6.4-34.3)*
Talked with spouse about FP			
No	1.0	1.0	1.0
Yes	4.7(3.3-6.8)*	4.5(3.2-6.5)*	4.5(3.5-5.8)

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTES: Outcome: currently using family planning=1, not currently using=0
[a] Odds ratios adjusted for all the variables in the model.
* $p \leq 0.05$, based on Z statistic for the significance of the regression coefficient.

Awareness of the Planned Parenthood Federation of Nigeria

A secondary objective of the PSA campaign was to acquaint the audience with the Planned Parenthood Federation of Nigeria (PPFN), the country's largest private-sector family planning provider. Accordingly, each PSA ended with a voice-over announcing, "This message is brought to you by the Planned Parenthood Federation of Nigeria, the family planning people." To assess name recognition, respondents were asked whether they had heard of PPFN, and, if so, what services the organization provided.

Recognition of PPFN increased substantially during the campaign (see Table 31). Of the follow-up respondents, 37 percent had heard of PPFN, up from 29 percent of baseline respondents. Far more men (46 percent) than women (29 percent) had heard of PPFN, as had far more urban respondents (46 percent) than rural respondents (16 percent). Of all follow-up respondents, 25 percent said they knew what services PPFN provided, up from 18 percent from baseline levels. Twice as many men as women and four times as many urban as rural respondents said they knew about PPFN's services. Awareness of PPFN was associated with degree of campaign recall. While only 13 percent of unexposed respondents had heard of PPFN, the figure climbed to 36 percent for those with moderate exposure and 55 percent for those with the highest exposure. (This exposure is based on comprehension of campaign materials, as discussed in Chapter V.)

Table 31.
Percent of Respondents Aware of PPFN, by Gender and Residence:
Baseline and Follow-up Surveys, Nigeria, 1992

Awareness of PPFN	Baseline (n=1,465)	Follow-up (n=1,446)
Heard of PPFN		
Gender		
Male	36.7	45.7*
Female	22.3	28.8*
Residence		
Urban	37.5	46.4*
Rural	11.5	16.2*
All respondents	29.3	36.6*
Knew what services PPFN provides		
Gender		
Male	21.7	30.9
Female	14.8	19.7*
Residence		
Urban	23.4	32.5*
Rural	6.8	8.8
All respondents	18.1	24.9*

SOURCE: JHU/CCP and FHS Nigeria PSA and Logo Campaigns (1988-1993).
NOTE: * Differences significant at $p \leq 0.05$.

Chapter VII. Summary of Major Findings for Future Planning

This paper has presented the evaluation results of two complementary national family planning campaigns in Nigeria, the Public Service Announcements (PSAs) component of the Music Project and the Logo Campaign. The main objective of the PSAs was to motivate urban couples to adopt modern family planning methods, while the Logo Campaign directed them to locations where they could obtain methods and services. The five carefully researched PSAs were broadcast on radio and television over a 6-month period in 1992. Each PSA signed off with the Planned Parenthood Federation of Nigeria logo and a voice-over inviting listeners to visit a family planning clinic. At the same time, print materials featuring the national family planning logo were distributed nationwide to facilities offering family planning services.

With the two campaigns coinciding, they reinforced each other's messages and provided an opportunity for joint evaluation. The evaluation was based on a quasi-experimental design. Cross-sectional surveys of nearly 1,500 men and women of reproductive age were conducted before and after the campaigns in urban and rural areas in Lagos, Enugu, and Kano. Analysis reveals that the two samples were relatively comparable.

Reaching the intended audience. The PSA and Logo Campaigns reached most adults of reproductive age in the areas studied, boosting overall exposure to family planning messages in the broadcast and print media by one-fourth to one-half over baseline levels. On average, respondents were exposed to 3.5 campaign materials. Nearly 88 percent were exposed to some form of family planning message during the campaign. The logo was seen by 69 percent of respondents to the follow-up survey, most of whom (87 percent) knew its meaning. Forty-three percent could recall at least one PSA spontaneously, and another 23 percent could do so with prompting. The campaigns reached a far greater proportion of city dwellers—the intended audience—than rural residents; for example, city dwellers were exposed to an average of 4.1 campaign materials and rural dwellers to just 2.3. Nearly half of urban respondents could both interpret the logo correctly and recall a PSA spontaneously, compared with fewer than one-fifth of rural respondents. Although exposure levels were low in rural areas, where more than 80 percent of the Nigerian population lives, the campaign still reached a large number of individuals there. It is also notable that the influence of exposure on rural couples was much greater than on urban couples.

The findings indicate that the campaigns reached more men than women. On average, men were also exposed to more campaign materials than women—thus men's exposure was more intense than women's. This is a particularly welcome finding, since it is often thought that men are hard to reach with family planning messages. The fact that many men recalled specific aspects of the campaign indicates that men are not so unresponsive to family planning information as previously had been thought. All the PSA concepts addressed men in their roles as fathers, husbands, or partners. The research findings suggest that providing information to men is both possible and productive in creating support and involvement in family planning among men.

Using mass media. The campaigns' use of multiple mass-media channels—radio, television, posters, and other print materials—succeeded in reaching a broad audience. While rural men and women proved harder to reach than their urban counterparts, the surveys confirmed that the campaigns' use of the broadcast media was an excellent way to reach rural audiences. In the follow-up survey, 38 percent of rural respondents named radio as their leading source of information about contraceptive methods, compared with 22 percent who cited health care providers and 9 percent who mentioned television. Thus radio continues to be one of the most important channels for communicating with rural men and women about family planning. In urban areas, where access to health personnel is easier, health care providers were the most frequently cited source of information about methods (29 percent of urban respondents). When combined, however, radio and television outweigh health personnel—one or the other medium was cited by 45 percent of urban respondents. The remaining 55 percent of citations were distributed among the other six or so sources. Future communication interventions in Nigeria should continue to rely on radio and television to disseminate messages about family planning.

Using print materials. Data reveal that print materials, such as posters, are an important part of information dissemination. Nearly 66 percent of respondents had seen family planning messages on posters and 40 percent had seen messages in newspapers. This indicates great potential in using these media in future programs to disseminate additional family planning messages.

Changing attitudes. A wide variety of measures indicate that the PSA and Logo Campaigns contributed to changing attitudes toward family planning. Comparison of the baseline and follow-up surveys shows significant increases in the proportion of respondents who approved of the use of family planning, who would recommend family planning to others, and who believed others also approved of family planning. Approval rose more significantly among women than men and among city dwellers than rural residents. There was general improvement in other attitudes as well, especially regarding the impact of family planning on marital relationships and the need for men to share responsibility for family planning. Appreciable gains were made among men and women in Kano, partly because low pre-existing levels of family planning approval allowed greater room for improvement. Indeed, this shift suggests that the time may have come for a family planning campaign explicitly directed toward men and the conservative populations in northern Nigeria.

The data also indicate that Nigeria has achieved a fairly high level of acceptance of family planning. Even when faced with strong opposition (in Kano), approval levels remained remarkably high. Future programs should build on these attitudes by informing people of their peers' acceptance and support of family planning. Programs should continue the efforts of the PSA and Logo Campaigns to motivate use of family planning.

A detailed examination of the survey data, however, identifies several areas that still need to be addressed in future campaigns. Responses about the impact of family planning on marital relationships were lukewarm. This suggests a continuing apprehension that using contraception might upset the relationship between husband and wife. The gap between levels of support for family planning among men and women diminished somewhat after the campaigns. Future

campaigns should seek to build on this convergence of attitudes by focusing on couples as the unit of interest and by promoting communication between partners.

Future interventions should also focus on those audiences with the least favorable attitudes. While the PSA and Logo Campaigns reduced the disparities in attitudes between men and women, the surveys indicate that other differentials persist. Attitudes are less favorable in the north, in rural areas, and among the less educated. During the six months between surveys, in fact, rural/urban and educational differentials in family planning attitudes actually widened.

Early marriage. The PSA *Wise Decision* encouraged parents to let their daughters finish school before marrying them off. It was broadcast only in the north, where child marriage is a particular problem. Analysis of the data from Kano shows that attitudes about this issue did not change over the course of the campaign. Before the campaign, more than one-fifth of respondents did not see the reason for delaying a girl's marriage until she had finished her education; this proportion actually increased to one-third after the campaign. Interviews with PPFN staff revealed their reasoning: The audience did not object to female education; rather it objected to delaying marriage for completion of schooling (Personal communication with PPFN staff). Local men and women did not see why a girl could not both marry and continue attending school. Future interventions should explore the possibility of combining marriage, education, and family planning, since this seems acceptable to a significant proportion of the population of northern Nigeria.

Nearly one-third of respondents do not believe that early marriage and childbearing can be dangerous to a girl's health. This is especially the case in Kano and Enugu, where there were no improvements even after the campaign. The campaigns did not specifically address the medical problems associated with early childbearing, but these results suggest that it, too, is an issue that needs attention.

The events that took place in Kano illustrate a case in which public controversy can create a net gain. In Kano, a Muslim group opposed to female education and delaying women's marriage organized a counter-campaign, broadcasting materials opposing the messages disseminated by the PSA and Logo campaigns. As mentioned in Chapter I, their supporters also traveled around the city tearing down posters and other logo materials. These activities inadvertently heightened awareness of the campaigns and generated debate in the community. Although residents in Kano remain more conservative about family planning than their counterparts in Enugu and Lagos, they still generally approve of family planning. The results also show that the conflict did polarize the population, leaving fewer people taking a neutral position: some became more strongly opposed to family planning and others more strongly supportive.

Couple communication. About half the respondents were exposed to the campaigns and reported discussing the messages with someone. The ability of interventions to stimulate discussion is confirmed by a significant increase over baseline levels in the percentage of follow-up survey respondents who had discussed family planning with their spouses or health workers. Indeed, the multivariate analysis found that men and women with high exposure to the campaigns were more than four times as likely as their unexposed counterparts to have talked

about family planning with their spouses in the preceding six months. This is an important finding because couple communication is a critical element in the process of adopting a contraceptive method.

Knowledge of contraceptives. Fully 95 percent of all respondents could name at least one method of family planning spontaneously or with prompting after the campaign. About 90 percent could name a modern method and 87 percent could name a nonmodern method. On average, respondents knew 3.2 methods of contraception, with men knowing slightly more methods than women. Although the PSA and Logo Campaigns were not designed to provide information about specific methods, future campaigns should address this need. The fact that respondents could name only three contraceptive methods *even after assistance* indicates low levels of method-specific knowledge. Given that Nigeria is predominantly rural and 57 percent of women have no formal education, according to the 1990 Nigeria DHS, further campaigns promoting family planning methods are needed if individuals are to become aware of a wide range of contraceptive options.

Contraceptive use. Not only did the campaigns contribute to a change in attitudes and discussion of family planning, but they also contributed to an increase in family planning use. Current contraceptive use rose from 25 percent to 32 percent in the 6-month period between the two surveys, and nearly all this increase was in modern method use. The multivariate analysis shows, however, that this increase was linked only with high campaign exposure. In both urban and rural areas, the likelihood of using contraception was exactly the same for those with no exposure to the campaign and those with moderate exposure. In contrast, moderate as well as high campaign exposure was associated with favorable attitudes and couple communication. These results suggest that, while a small campaign may be sufficient to change attitudes and stimulate conversation about family planning, intense, comprehensive multimedia campaigns are necessary to modify behavior.

Awareness of PPFN. A secondary objective of the campaigns was to inform the public about the Planned Parenthood Federation of Nigeria (which implemented the Music Project) and to publicize its clinics. Results show a considerable increase in public awareness of PPFN and the services it provides: The proportion of respondents who had heard of PPFN rose from 29 percent before the campaigns to 37 percent afterwards; recognition of the organization's logo rose from 23 percent to 29 percent; and knowledge of what services PPFN provides rose from 18 percent to 25 percent.

Managing the evaluation. Both the baseline and follow-up surveys were ably carried out by members of the Department of Demography at the Obafemi Awolowo University in Ile Ife. Because of their familiarity with the study areas and their access to local consultants, the evaluation team was able to mobilize researchers and execute the task quickly. Using the same researchers for both surveys allowed the team to cut down the number of steps involved. By returning to the same study areas, they were able to acquire highly comparable baseline and follow-up samples. Contracting services out to reputable institutions such as this can be an efficient way to conduct an evaluation.

In conclusion, while the changes in family planning behavior observed during the campaign period cannot be attributed to the interventions alone, it is clear that the PSA and Logo campaigns reached a large proportion of the intended audience with messages that were understandable and easily recalled. The majority of respondents could recognize the campaign materials and relate the main messages. Exposure was positively associated with favorable attitudes toward family planning and couple communication as well as with the use of family planning.

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Appendix A.
Multiple Logistic Regression and the Odds Ratio

This evaluation examines the impact of a single predictor variable on the outcome, both in the presence of other predictors and in their absence. For example, what is the impact of the campaigns when the model includes education, urban / rural residence, sociodemographic characteristics and so forth? Change in the impact of a predictor variable suggests that other variables account for some of its contribution, and this can help in designing programs. If in the presence of education, for instance, the campaigns have no influence, than the observed changes are largely due to education. Since outcomes were measured as a dichotomous variable (e.g., using and not using contraception), multiple logistic regression was used to analyze the data.

In logistic regression, the log of the odds of the dependent variable is a linear function of the independent variables (Schlesselman, 1982; Hosmer and Lemeshow, 1989):

$$\text{Ln}\left[\frac{p}{1-p}\right] = \propto + \sum (B_i X_i)$$

Log of the odds of using a contraceptive method = Intercept + $B_1 X_1$ + $B_2 X_2$ .... $B_p X_p$

where:

X_p are the independent variables

Bs are the regression coefficients associated with a specific predictor

p = probability of using a contraceptive method

The regression coefficient associated with each predictor indicates its effect on the log odds of using a contraceptive method, with all other predictors in the model held constant. The coefficient indicates the magnitude of the increase or decrease in the log odds produced by one unit change in the value of the predictor variable. Therefore, the exponential of a regression coefficient can be interpreted as the odds ratio associated with one unit change of the predictor.

The measure of association used in this analysis was the odds ratio. The odds ratio compares the likelihood of observing an outcome among persons exposed to the factor of interest compared with those not exposed. In this study, we used the odds ratio to examine *the likelihood of holding favorable attitudes toward family planning, of discussing family planning with one's spouse, and of using contraceptives if a respondent was exposed to the campaigns versus if he or she had not been exposed, net of all other variables in the model.* In interpreting the odds ratio, one group must be selected as a reference category, and all others are compared with it. The results are presented as values above 1.00, equal to 1.00, or below 1.00. Values above 1.00 indicate that persons with the factor were more likely to use contraceptives than persons in the reference group. Values below 1.00 suggest that persons with the factor were less likely to use than those in the reference group. Because the odds ratio compares two numbers, it expresses how many times more likely one group is to use contraceptives than the reference group, thereby providing a measure of the strength of the relationship. A more detailed explanation of the odds ratio can be found in advanced epidemiology texts.